HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH

AND SOCIAL SECURITY

VOLUME 20, NO. 1, ABSTRACTS 1-149. JANUARY 1980

LONDON: HER MAJESTY'S STATIONERY OFFICE

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First published 1980

ISBN 0 11 722663 7
ISSN 0018 5507

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HOSPITAL ABSTRACTS

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HOSPITALS IN GREAT BRITAIN

See also Abstract Nos. 52, 69

1. **Crucial years for private practice.** *BMA News Review*, London, 1979, Oct., vol. 5, no. 10, pp. 38, 40, 41, 43, 45, 46.

The record demand for private health insurance in Great Britain is encouraging an increasing number of doctors to draw up plans for private hospital developments. This paper discusses briefly some of the projects being planned. It points out that there are considerable barriers to such developments, including the length of the planning period, and the reluctance of businessmen to invest in new hospital schemes because of political and economic uncertainties.

2. LONDON HEALTH PLANNING CONSORTIUM. **Acute hospital services in London.** London, HMSO, for Department of Health and Social Security, 1979, v, 72pp. £6.50 (ISBN 0 11 320719 0).

Thirteen and a half million people live in the Thames Regional Health Authority areas of England, seven million of them in Greater London. The proper balance of provision and distribution of teaching hospitals is discussed. There are four main sections on: (i) the evolution of London's hospitals; (ii) population and social characteristics of London; (iii) the present pattern and use of London's hospitals; and (iv) signposts for the future. Statistics are given to show the various trends in areas such as bed provision and population.

HOSPITALS IN OTHER COUNTRIES

See also Abstract No. 130

3. HELBIG, W. Zukunft der pluralistischen Krankenhaus-trägerstruktur. **[The future of pluralistic hospital ownership.]** *Krankenhaus-Umschau*, Kulmbach, 1979, Aug., vol. 48, no. 8, pp. 641-644.

This is a plea for the retention of hospital ownership by religious denominations and a limiting of State monopoly in the hospital field in West Germany. Stress is laid on the Christian attitude towards illness and the care of the sick and the continuing need for the role of religion in hospital work.

4. LORENSER, H. Selbstverwaltung und Regionalisierung der Krankenhausversorgung. **[Autonomy and regionalization of medical care.]** *Krankenhaus-Umschau*, Kulmbach, 1979, Aug., vol. 48, no. 8, pp. 633-636.

In this paper the Mayor of Ulm discusses the advantages and disadvantages of proposals for the regionalization and State-controlled planning of hospital services in West Germany which have been envisaged in recent legislation. He concludes that an

efficient regionalization system could lead to the disappearance, or at least a limitation of 'perfectionist state planning'. A plea is also made for the simplification of the complicated system for the financing of hospital services.

PLANNING, DESIGN AND CONSTRUCTION

5. TVETERAAS, R. Brukermedvirkning i planleggingen demokrati eller spillfekteri? **[User-co-operation in hospital planning—real or pretended democracy?]** *Sykehuset*, Oslo, 1979, vol. 42, no. 5, pp. 423-429.

In this paper on 'user' collaboration in hospital planning 'users' are defined as professionally qualified people who are either working in a hospital or are acting as consultants in the interests of such individuals. It is recognized that too much consultation of too many people in the interests of democracy can slow up and even bog down planning procedure. On the other hand it is important not only that the staff who will use the hospital have a proper opportunity to represent their interests (and the interests of patients) but also that they should be able to appreciate the points of view of the architect and other planners. If hospital staff are to co-operate usefully in the planning process they need some training in planning problems and procedures—in Norway nurses do get some training in this area but for medical students it is largely lacking. Scandinavian countries appreciate the need for a handbook on planning procedures for all groups of hospital staff, who should be kept informed of what is happening throughout the whole of the planning process.

BUILDING COSTS

6. SPRAGUEM, J. G. **Should a hospital consider construction management?** *Hospitals*, Chicago, Ill., Sept. 1, vol. 53, no. 17, pp. 57-60.

Construction management is a process by which a hospital can purchase management services separate from design services and separate from the construction itself. Theoretically the hospital is expected to get the most building possible as soon as possible and within predictable budgets. While these goals are all highly desirable, there are potential pitfalls. The advantages of construction management are discussed; the need for proper implementation if potential savings are to be realized, is stressed. Hospitals should consider construction management in their building projects, particularly if a period of general inflation and rapid construction cost increases is expected. If, in selecting a construction manager, the hospital can be reasonably assured that the advantages offered by the construction management approach can be realized, there is little doubt that it will be the right decision.

HOSPITAL DESIGN

See also Abstract No. 80

7. RIVA, A. and MENGERINGHAUSEN, M. Ospedali tascabili. **[Small hospitals.]** *Tecnica Ospedaliera*, Milano, 1979, Oct., vol. 9, no. 10, pp. 20-29.

A design is proposed for a standardized single-storey 'pocket' hospital (30 to 180

beds) which could be built in a developing country and does not require the use of costly imported materials. The design is based on a series of monofunctional units (macrocells) which can be arranged around a central courtyard or can be joined one to another in sequence without the general organization of the building having to be changed. The design package contains a codified building system and allows scope for the use of local building materials. It also includes a list of equipment and furniture. Plans for the following departments, for each of which the dimensions are standardized, are included—offices, out-patients, laboratory, X-ray, pharmacy, theatres, and delivery room, and wards for medicine, surgery, obstetrics and gynaecology, paediatrics and infectious diseases.

8. Ottó, D. Korszerü építési technológiák alkalmazása egészségügyi létesítményeknél. **[Application of up-to-date technologies in the construction of health facilities.]** *Egészségügyi Gazdasági Szemle*, Budapest, 1979, Sept., vol. 17, no. 3, pp. 243-255.

The Hungarian Ministry of Health is trying to streamline its building specifications and contract tendering system. The author, a senior architect at the Ministry, is also anxious to promote modern building methods and materials. Amongst the new technologies he lists pillar skeletons, prefabricated pillars and panels, and reinforced concrete slab construction. An account is given of progress since 1960 and several plans and blueprints are illustrated.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

9. Sloane, R. P. **Newham nucleus hospital.** *Hospital and Health Services Review*, London, 1979, Dec., vol. 75, no. 12, pp. 420-422.

Economic constraints have led to a reduction in the building of new hospitals in Great Britain and emphasis on making the maximum use of the existing building stock. There remain, however, certain locations where new buildings are the only answer. The Nucleus design concept was evolved to meet this need. It uses standard design data and operational policies to prove a first phase development of about 300 beds. Newham was chosen as the first Nucleus hospital project. A working party involving Department of Health and Social Security, regional, area and district representatives determined the functional content of the hospital. These reflect the acute service needs of the district and will be capable of supporting an active accident and emergency service. There will be 224 adult acute beds, 69 children's beds, 15 day beds, intensive therapy unit, coronary care, accident and emergency, out-patients, four operating theatre suites and supporting diagnostic departments. An existing hospital will be upgraded to provide a further 245 acute beds to meet the total acute bed needs of the district. Problems include the dependence on off-site support services and residential accommodation. A number of operational difficulties arising from the design are discussed. Despite the anticipated difficulties, the new hospital will provide modern facilities within a timescale and cost that would not have been achieved with a 'one-off' design project.

10. HEIDERER, G. Der Neubau des Krankenhauses Zwettl. **[The new Zwettl Hospital.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1979, Oct., vol. 20, no. 10, pp. 504, 506, 508, 510.

The new 264-bed hospital at Zwettl (Lower Austria) came into use in April 1979. The four departments for medicine (72 beds), surgery (74 beds), obstetrics and gynaecology (44 beds) and paediatrics have been built on a pavilion system: instead of corridors, different areas are linked by open areas which provide space for waiting rooms, visitors' rooms, day rooms and dining rooms. Patients' rooms have two, three or six beds and are designed and furnished to give a home-like atmosphere. Service, examination and treatment departments are housed in a two-storey 40 m by 80 m block. There is also a seven-bedded intensive care unit. Air-conditioning is provided only in areas requiring a very high standard of hygiene (for example, the intensive care unit and operating theatres).

EXTENSIONS AND RECONSTRUCTIONS

See also Abstract No. 39

11. HOWELLS, S. **New hospitals from old stock.** *Health and Social Service Journal*, London, 1979, Nov. 23, vol. 89, pp. 1512-1513.

The Nelson Hospital in the London Borough of Merton was established by voluntary effort in the early 1900s and with progressive additions it now has accommodation for about 110 beds (currently orthopaedic, general surgery, and gynaecology). The area's strategic plan saw it being retained indefinitely as a 'supporting' hospital. The buildings are basically sound, but present a number of problems. Following a research and development project sponsored by the Department of Health and Social Security, the hospital is to be adapted to provide 48 surgical/orthopaedic beds, 12 gynaecology beds, a new operating suite, a 48-bed geriatric unit and a geriatric day hospital. The feasibility study has also shown other possibilities for improving facilities for supporting functions when the finance becomes available. The work will cost (at March 1979 prices) £470,000 and will enable another, smaller hospital to close with an annual revenue saving of at least £300,000.

12. HALLAUER, F. Planung und Finanzierung von Krankenhaussanierung und Krankenhausmodernisierung: eine Fallstudie. **[The planning and financing of hospital improvements and modernization: a case study.]** *Krankenhaus-Umschau*, Kulmbach, 1979, Aug., vol. 48, no. 8, pp. 649-657.

The case is cited of a 382-bed hospital commissioned in 1963 which needs modernizing and extending. A study of 26 other hospitals and some basic norms show that, for modern requirements the area for examination and treatment is 46 per cent below standard and that for wards 50 per cent below. Patients' rooms are three-bedded (the current preference is for double rooms), without sanitary facilities and there is no intensive care unit. The various options for improving the hospital are discussed: they include an extension to the west (which would cost DM3m), an extension to the east (not much cheaper and less functional) or a three-storey extension to the examination and treatment block with podium (total cost DM16m). The advantages and dis-

advantages of each proposal are set out and the financing of the projects discussed. The paper is illustrated with a number of tables, one of which compares space data for a number of hospitals.

DESIGN OF SPECIAL DEPARTMENTS

13. **Design of departments: accident and emergency services.** *British Medical Journal*, London, 1979, Nov. 10, vol. ii, pp. 1204-1207.

The accident and emergency department must be planned and equipped to deal efficiently with urgent cases at any time. Planning is tied up with philosophies and policies about what the department is meant to be doing—but these are not always made explicit from the beginning. Specific requirements for an efficient department are: good organization, including communications; ease of access; ease of supervision; good flowlines in the layout; privacy for patients and for distressed relatives; and flexibility in the use of space. Full consultation with those who are to work in the department is essential.

14. SPRAKE, J. M., NEWCOMBE, D. W. and TIMSON, R. M. **A new quality control unit in Nottinghamshire.** *Pharmaceutical Journal*, London, 1979, Dec. 1, pp. 560, 561, 568.

A new quality control unit was opened in March 1979 at King's Mill Hospital, Sutton-in-Ashfield, to meet the needs of the North Nottinghamshire area. The unit is an extension of the existing pharmacy with one common wall, which has the only entrance to the unit. Corridor space was kept to a minimum to reduce costs. Details are given of the design and equipment of the unit, which comprises chemical laboratory, instrument laboratory, 'museum' and office. New posts of staff pharmacist and senior pharmacy technician were established; other staff are provided on a rotational basis. Brief details are given of the Trent Region quality control service of which this unit is a part. A plan of the unit is included.

ENTRANCES, CORRIDORS AND STAIRWAYS

15. JOHNSON, B. M. and JONES, B. K. **Problems of moving patients in buildings.** (Building Research Note No. 127) Ottawa, National Research Council of Canada, Division of Building Research, 1978, 26pp.

This study was designed to gather information on the type and extent of problems connected with moving patients, in order to aid architects and planners. Ambulance attendants and patients are rarely considered at present when buildings are being designed. Often there is insufficient corridor or lift space to allow a stretcher to be kept horizontal, which results in time delays and extra manhandling which can be critical to the patient. According to the Ontario Ambulance Service Information System (OASIS), 450,000 ambulance trips were made in the province of Ontario in 1973. Data on all ambulance trips in this province have been collected and analyzed, and results have shown that in 1973, approximately 70 per cent of trips involved calls to buildings with all the attendant problems. Recommended standards are given for doorways, elevators, stairs and corridors.

GUIDING AND SIGNPOSTING

16. TROEDSSON, S. Rapport om testning av symboler för vägvisning inom sjukvården. **[Report on test of symbols for signposting in health care establishments.]** Stockholm, Spri, 1979, 89pp.

Symbols have the advantage of being comprehensible to all nationalities and to those who cannot read. International conventions already exist for traffic signs and tourist information. With the agreement of the International Standards Organization, Spri is now working on symbols for use in hospitals. Symbols representing 35 departments have already been tested, the results are presented in this report. The criteria used for designing the symbols were that they should be: (i) representative of what they illustrated; (ii) easy to perceive; (iii) easy to understand; and (iv) not offensive. As well as Spri's suggestions a number of ideas from other sources are shown.

ENGINEERING SERVICES

ARTIFICIAL LIGHTING

17. MAINARDI, R. Canali testaletto per camere di degenza ospedaliera. **[Fittings for hospital patients' beds.]** *Tecnica Ospedaliera*, Milano, 1979, Oct., vol. 9, no. 10, pp. 42-47.

The author explains the value of a modular prefabricated housing which can be fitted along the wall above the patient's bed and which will conceal the pipes and wires behind the electric switches, the patient's call bell, the television plug, the leads for oxygen and other gases, and the light-fitting which is attached to the housing. This light fitment has three lamps—one for reading, one for general lighting, and one for use when the patient is being examined. Unless they are correctly installed, however, these housings can be dangerous. The Author quotes the standards laid down by the International Electrotechnical Commission and illustrates his article with a graph showing the effects of alternating current with a frequency of 50 Hz on an adult when it goes through a hand or foot, illumination curves for the three different lights, and two diagrams of the housing and light fitting.

HEATING

18. MANSER, R. **Hospital design philosophy for the 21st century.** *Hospital Engineering*, London, 1979, Nov., vol. 33, no. 9, pp. 4-7.

The author discusses the future relationship between electricity and hospital building design, with special reference to heating and cooling systems. A brick shell inside 12 inches of insulation is probably the best for low energy use. The author predicts that within 25 years electrically-controlled windows will transmit radiation in both directions, thereby providing a significant degree of solar heating. Three types of

air-conditioning are considered: (i) natural ventilation plus a heating system; (ii) full air-conditioning; and (iii) open windows plus background ventilation and heating. The first is popular, but needs adequate insulation, reasonable fenestration ratios and heat reclamation where possible. Full air-conditioning should include the maximum acceptable level of re-circulation. As for the third alternative, background ventilation can be provided by mechanical extraction permitting heat recovery in the duct, thereby maintaining both ventilation and warmth. The following devices for heat reclamation are discussed: (i) plate type heat exchanger or heat pipe; (ii) the thermal wheel; and (iii) the heat pump. The author believes that better building design and, eventually, a renewable source of energy, will produce a marked decrease in heating bills of large health service buildings.

19. DUBBELD, M. and GUNT, E. van. **Climate control for extensive buildings with normal floor height requiring a very flexible division, for example, in a large hospital.** *Energy Research*, Chichester, 1979, July/Sept., vol. 3, no. 3, pp. 211-234.

Climate control in large buildings with a relatively large volume and inner surface calls for a different approach from that in general facade buildings. As an example of such buildings, the TNO Research Institute for Environmental Hygiene, Delft, in the Netherlands, chose for investigation some Dutch university hospitals in the course of construction. Elements in the investigation were: (i) determination of the preferential dimensions of the eddies; (ii) measurement of the connection between heat transport via the air and that via the ceiling in a model on a scale of 1:5; (iii) calculation of the spatial temperature; (iv) measurement of a spatial temperature in a test room in a model on a scale of 1:1; (v) investigation into the relationship between stability and comfort; and (vi) measurement of spatial temperatures in the building concerned. The investigation showed that temperature differences in large spaces divided into rooms may be 2°C, if the load difference is 35W per sq. m. and if the temperature of the climate media supplied is constant. If the temperature differences are sufficiently small, it may suffice to operate one installation which maintains the climate for several rooms at the same time within certain limits. Photographs and diagrams are included.

VENTILATION AND AIR-CONDITIONING

See also Abstract Nos. 18, 19

20. CARR, R. **Steam humidifiers—their use and application.** *Hospital Engineering*, London, 1979, Nov., vol. 33, no. 9, pp. 8-11.

Humidification is beneficial on grounds of health, comfort and energy conservation. Modern steam humidifiers have the following advantages: (i) all evaporation is carried out in the steam boiler; and (ii) normal plant steam is cleaned and dried and put into the air supply free of amines and water droplets. For a steam humidifier to perform properly a number of design criteria must be met, including: (i) steam jacketing of the control valve; (ii) full separation of steam ahead of the valve: and (iii) a trap to drain the separator of solids. The humidifier should have an integral control valve with a characteristic to match the requirements of the system. For humidity control to be accurate, controllers must be correctly selected and sited. Humidifiers should be

installed at the point of highest duct temperature and the air to be humidified must be able to absorb the steam with safety. Reasons for the continued and increasing use of steam humidifiers in numerous hospitals include: (i) moisture is added in vapour form; (ii) steam is sterile and easy to control; (iii) costs and maintenance requirements are low; and (iv) space needed for the plant is small.

MAINTENANCE OF BUILDINGS AND EQUIPMENT

21. ZELDERS, T. **Hospital equipment management, maintenance and quality control in the Netherlands.** *Journal of Medical Engineering and Technology*, London, 1979, Nov., vol. 3, no. 6, pp. 292-294.

As the Netherlands do not have a national health service, co-operation between hospitals is at the initiative of directors and staff. The government does play an important role in two respects: regulatory legislation; and co-ordination of the building and development of hospitals. Before 1970, equipment maintenance and quality control were unorganized and there was little or no co-operation between physicians, hospital staff and instrument suppliers. In the past eight years a new situation has arisen where rules are being formulated on the basis of collective experience. Organizations in this field include the Working Group on Instrument Evaluation at University Hospitals, the Hospital Electronic Engineers Sub-Section of the Association of Hospital Engineers, and the Netherlands Association of Clinical Physicists. A better understanding is required between physicians, nurses and engineers of each others' needs and capabilities in relation to the use of instruments and the need for maintenance. To keep quality on an acceptable level, exaggeration in one direction or another has to be avoided.

SANITARY EQUIPMENT AND FITTINGS

See also Abstract No. 79

22. PAYNE, R. **Planned preventive maintenance: drainage and sanitation for hospitals and other buildings.** *Hospital Engineering*, London, 1979, Nov., vol. 33, no. 9, pp. 17, 18, 20, 21.

The provision of adequate drainage and sanitation systems in hospitals is crucial to medical care. This paper deals particularly with the maintenance of sanitary and surface water systems. Manholes and cleaning eyes should be built into the system where easily accessible and material for pipes, which should be smooth bore, must suit the effluents likely to be discharged. All new staff should be educated about the risks of mis-using sanitary appliances especially lavatories and bedpan macerators. Kitchens also cause problems if staff instruction is inadequate and design faulty. Remedial work, both inside and outside, can often reduce the amount of repeated and emergency maintenance. Maintenance of new buildings should be minimal if the correct materials and fittings are used. In older buildings, the upkeep of roof drainage and external pipework is essential to prevent release of effluent on to the face of the building. The following are essential to planned maintenance: (i) adequate records of pipework and

fittings: (ii) a management control system with adequate funds; and (iii) a procedure for regular inspection, monitoring and recording. The plan may involve a general inspection every five years, or a more elaborate programme.

EQUIPMENT, FITTINGS, FURNITURE

BEDS, COTS, ETC.

See also Abstract No. 17

23. COKER, K. E. **The intermittent air-fluidized bed and the neurologically impaired patient.** *Journal of Neurosurgical Nursing*, Chicago, Ill., 1979, March, vol. 11, no. 1, pp. 31-33.

The intermittent air-fluidized bed, developed at the Medical University of South Carolina, has been used in the neurological nursing unit of the University Hospital for five years. It has proved very successful in the prevention of decubitus ulcers in the immobilized patient. The bed is ideal for the unconscious or paralyzed patient and for the orthopaedic patient in traction. It is a box supported on castors and filled with fine ceramic beads. The patient is separated from the support by vinyl sheeting with air vents, and fluidization is accomplished by a motor blower that forces air through the beads at intervals. A patient turning schedule is unnecessary and pain is minimized by the even distribution of pressure. Three case histories are described to illustrate the benefits of the bed for immobile patients.

LOCKERS, BED-TABLES, CHAIRS

See Abstract No. 110

HARDWARE, BEDPANS, URINE BOTTLES

24. HAWKINS, C. M. **A survey of systems in use for disposal/disinfection of bedpans and associated equipment.** *Contact*, London, 1979, Sept., no. 12, pp. 5-7.

This survey of systems available for the disposal of disinfection of bedpans is based on a literature survey, discussions with researchers in the field, and questionnaires completed by infection control nurses. It covers: systems in use; make and age of machines; analysis of breakdown rate; noise factors; disinfection of disposable bedpan support; storage problems; and efficiency of systems. Criteria derived from the survey are: (i) a multidisciplinary team approach at the planning stage and in on-going assessment of efficiency of the equipment in use; (ii) more research by manufacturers, with equipment trials to assess whether safety standards are reached; (iii) built-in recording devices and fail-safe mechanisms in washers/disinfectors; (iv) education of users in system chosen; (v) a system of planned preventive maintenance; and (vi) regular microbiological tests to check for aerosol contamination, etc.

EQUIPMENT GENERALLY

See Abstract Nos. 21, 91

MEDICAL EQUIPMENT

See Abstract Nos. 116, 137

AUDIO-VISUAL EQUIPMENT

25. KINROSS, V. **Look, listen and learn.** *Middle East Health*, Sutton, 1979, Oct., vol. 3, no. 9, pp. 22-23.

Brief details are given of the range of audio-visual materials now available in Arabic for use in the education of doctors, nurses and other health professionals.

ELECTRONIC EQUIPMENT

See Abstract No. 77

STAFF GENERALLY

STAFF COMPLEMENTS

See Abstract No. 29

RECRUITMENT AND MANPOWER

See Abstract Nos. 33, 34, 95, 125

CONDITIONS OF SERVICE

See Abstract No. 67

STAFF MANAGEMENT

See also Abstract No. 32

26. BASTIANELLI, J. P. Plaidoyer pour l'horaire variable. **[A call for flexible working hours.]** *Gestions Hospitalières*, Mantes-la-Jolie, 1979, Oct., no. 189, pp. 755-758.

At first sight it might appear impossible to have flexible hours in a hospital, but this is not necessarily the case. The author describes the introduction of a flexible-hour system in a 280-bed unit at the Charles Foix Hospital at Ivry. Trial and error proved that a system based on a 14-day work period was the most suitable. Only one flexible hour at the beginning and end of each shift can be allowed because of the need to have

somebody in the unit all the time. The nursing and auxiliary staff are pleased with the system and from the administrators' point of view it has more advantages than disadvantages.

STAFF RELATIONS

See Abstract No. 5

STAFF TRAINING

See Abstract No. 97

STAFF WELFARE

See also Abstract No. 34

27. BROWN, M. P. **Hazards in the hospital: educating the workforce through its union.** *American Journal of Public Health*, Washington, D.C., 1979, Oct., vol. 69, no. 10, pp. 1040-1043.

Hospital staff are exposed to many occupational hazards of which most of them are unaware. Two health educators employed by the California State Department of Health conducted occupational health and safety educational sessions for the membership of a hospital workers' union. They first had to convince the health and safety office of the union that they had skills and information which would be of benefit to the union's membership by providing them with relevant literature. The first session included: a slide show; a short presentation describing hazards to hospital staff; a group discussion on identification of hazards; and completion of questionnaires, previously developed for a needs-assessment survey which the union refused to allow. At a follow-up session, the survey results were presented, thus informing the workers that others, at their own hospital or others in the area had similar problems. The two sessions were also held for hospital staff in another county. In spite of the number of problems encountered, the authors are convinced that their efforts were welcomed by the workers and that there is great potential in this approach to improving staff health.

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

See Abstract Nos. 30, 91

MEDICAL STAFF

See also Abstract Nos. 54, 56

28. THOMPSON, H. C. and others. **Career in pediatrics.** *Pediatrics*, Evanston, Ill., 1979, Aug., vol. 64, no. 2, pp. 259-268.

Under the auspices of the Committee on Expanding Pediatric Careers of the

American Academy of Pediatrics (AAP), a survey was conducted of Academy members between the ages of 40 and 75 years. The specific purposes of the survey were: (i) to define the level of interest among the membership in career activities; (ii) to collect information helpful in guiding the development of appropriate new programmes in the Academy; and (iii) to identify areas of priority among the membership in career-related issues. Of the 810 respondents (nine per cent of eligible AAP fellows), one-third had already changed the direction of their work at least once. Only 61 per cent would now seriously consider an alteration in their career. Only one-third have plans for retirement and one-sixth do not expect to retire. The report examines the background for these unexpected statistics, the survey which yielded them, their significance, and what has been or may be done by the Academy to meet the challenge which they present.

29. COMHAIRLE NA N-OSPIDÉAL. **Consultant manpower projection up to 1981.** [Dublin], Comhairle na n-Ospidéal, 1978, 26 pp.

Hospital consultant manpower planning has been undertaken in Eire since 1972. The present plan has three objectives: (i) to provide clear guidelines within which decisions on individual applications for consultant appointments can be taken; (ii) to promote a systematic approach to policy problems such as the organization of particular specialties; and (iii) to provide reliable information on career opportunities at consultant level. The consultant/population ratio in 1978 was 1:3,100 but it is planned to increase the establishment by 175 posts to achieve a ratio in 1981 of 1:2,600. The timetable for implementation of the plan is being left to local health boards. A number of statistical tables are given and there is an appendix giving guidelines on consultant staffing in general hospitals in relation to population catchment area size.

NURSING STAFF

See also Abstract Nos. 47, 78, 93, 96, 97, 133

30. PRESTØY, A. Sjefsykepleier i organisasjonen. **[The chief nursing officer in hospital administration.]** *Norsk Sykehustidende*, Oslo, 1979, vol. 52, no. 8, pp. 5-6, 8, 10-11.

In this paper the chief nursing officer of the Nordland Central Hospital in Norway discusses the place of the chief nursing officer in the hospital management system, with particular reference to Norway. Practice varies from hospital to hospital. Sometimes the nursing service comes directly under the consultant in charge of a ward or department; sometimes the chief nursing officer is the responsible officer for all aspects of the nursing service, independently of the medical staff. The author sets out three suggestions for the organization of nursing services in a hospital. The first proposal is that the chief nursing officer should be a member of the administrative team with a status equal to that of the administrator, and the medical and technical staff; though a senior medical officer would be responsible for all services in his ward or department, including nursing. The second proposal is that the responsibility for each group of staff should be in the hands of the head of each service. Under the third proposal the whole responsibility for the nursing service, the largest staff group in the hospital,

would be separated from other ward functions and would be in the hands of the chief nursing officer. These proposals are put forward as a basis for discussion.

31. ABDELLAH, F. G. and LEVINE, E. **Better patient care through nursing research.** 2nd edition. New York, Macmillan; London, Collier Macmillan, 1979, xiv, 753pp. £12.75. (ISBN 0 02 300110 0)

Using numerous examples drawn from nursing, some guidelines are given on methods and tools of research. The book is in four sections. The first part of the book is a general introduction, with a brief history of nursing research. The second part contains a description of research methodology, the formulation of research problems, the interpretation of findings and methods of making results known. The third section is a discussion of the findings of numerous research projects in nursing, many unpublished, grouped according to their major purpose and method. The last chapters of the book review the present status of nursing research and suggest areas and specific projects for further research. The volume ends with a glossary, a bibliography (including an index) and a subject index.

32. BERGMANN, T. Arbeitsplanung in der Pflege. **[Work planning for nursing.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1979, Oct., vol. 20, no. 10, pp. 495-496, 498, 500, 502, 504.

Planned nursing consists of the following phases: obtaining information; processing information; developing active procedures from the information; carrying out the procedures; and checking procedures and their effects. The successive phases are directly dependent on each other and their effectiveness depends on the flexibility with which they are carried out. Each phase is described and the advantages for both patients and nurses of planned nursing set out.

33. ANNANDALE-STEINER, D. **Unhappiness is the nurse who expected more.** *Nursing Mirror*, Sutton, 1979, Nov. 29, vol. 149, no. 22, pp. 34-36.

The author has been a counsellor at Guy's Hospital, London, for 18 months. Of the first 150 people who saw her, 105 were nurse learners and 22 were trained nursing staff. Of these, 50 had thought of leaving at some stage of the counselling, 43 came with the idea already in mind, and seven subsequently considered it; 40 ultimately left without completing their training or, if already trained, their expected stay. Major areas of unhappiness included job dissatisfaction, hierarchy, and conditions of work (particularly hours). Money and poor career prospects only became issues when there were other dissatisfactions. Much could be done to disillusion over-idealistic potential recruits at the time of interview. But the real failure lies not in the area of recruitment, but of retraining nurses once they have started training. Greater care is required on the part of senior staff and some changes in attitudes are particularly necessary.

34. FARRANT, E. M. **Why do nurses go 'off sick'?** *Nursing Focus*, London, 1979, Sept., vol. 1, no. 1, pp. 20, 22, 24.

The phrase 'off sick' means that nurses have temporarily withdrawn from their contractual employment, be they learners or qualified staff. Nurse managers and others are often in doubt regarding the validity of the sickness, but there is no doubt about the

genuineness of the absenteeism. While occasional absences are generally understandable, repeated short-term absence can become a management problem. The greatest amount of short-term sickness absence is to be found in hospitals with large nurse training schools. Young people away from home for the first time may be vulnerable to emotional and psychological problems, as well as to hospital infection. Possible solutions to the problems are discussed and the following conclusions drawn: (i) more serious research into the subject is very necessary, preferably done by a nurse; (ii) more careful selection of staff/students is imperative; and (iii) motivation as well as academic ability, together with an occupational health assessment, can only improve the standard of the employee.

35. WEBER, T. Die psychosomatisch tätige Schwester als Mitglied eines Behandlungsteams. **[The nurse on a psychosomatic ward as a member of the treatment team.]** *Deutsche Krankenpflege-Zeitschrift*, Stuttgart, 1979, Nov., vol. 32, no. 11, pp. 597-600.

The author describes her work as the only nurse on a ward for teenagers at the Tiefenbrunn hospital for psychogenic and psychosomatic diseases. The ward takes 11 boys and 11 girls aged between 15 and 19. There are three areas of treatment: discussion psychotherapy; teaching; and social therapy. The staff includes doctors, psychologists and child psychotherapists. The nurse, who has had post-basic psychosomatic-psychotherapeutic training, functions as ward leader. She is responsible for ward administration but the medical and nursing component of her work is very small compared with that of a medical ward. It is limited to first aid measures, medical advice and drug distribution.

OTHER PROFESSIONAL AND TECHNICAL STAFF

See Abstract No. 90

ORGANIZATION AND ADMINISTRATION

See also Abstract No. 4

36. ZUCHA, O. Soziales Umfeld Krankenhaus: Ergebnisse der Medizinsoziologie. **[The hospital as a social environment: the consequences of medical sociology.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1979, Sept., vol. 20, no. 9, pp. 437, 438, 441, 442, 444-446.

The author defines 'medical sociology' as including a study of the relationships between living conditions and illness. He then discusses the theory of the hospital as a social and bureaucratic organization, in which the 'human relations model' plays an important role and requires continuing training of staff in communication and co-operation. Hospitals are 'total institutions' in which the normal boundary between sleeping, leisure and work disappears: the ways in which this situation affects the patient are described.

GOVERNING BODIES, COMMITTEES

See Abstract No. 53

ECONOMICS OF HOSPITAL MANAGEMENT

See Abstract Nos. 6, 18, 46, 57, 64, 65, 123, 136, 138

BED OCCUPANCY, ECONOMIC USE OF BEDS

See also Abstract No. 44

37. DUNCAN, I. B. and NOBLE, B. M. **The allocation of specialties to hospitals in a health district.** *Journal of the Operational Research Society*, Oxford, 1979, Nov., vol. 30, no. 11, pp. 953-964.

The complex hospital planning procedure for any health district includes the allocation of specialties to the hospitals which already exist or which are likely to exist in the future. This paper describes an approach by which the allocation can be performed, based on a network flow model. Firstly, a number of constraints must be specified, including the total number of beds required by each specialty and the current number in each existing hospital. A network in which all the constraints are satisfied is called a 'tentative network' and a network in which a flow can exist to satisfy the constraints is a 'plausible network'. Each 'plausible network' represents a satisfactory allocation of specialties. The approach is illustrated by a simple example involving four hospitals and seven specialties within a district; two networks are seen to be feasible. This approach can be expensive in computer time and must, therefore, be applied to a specific district where only a few alternative allocations are feasible.

38. RUDGE, J. F. and RICHARDS, B. W. **Strategic planning of acute beds by specialty.** *British Medical Journal*, London, 1979, Nov. 10, pp. 1240-1242.

Some of the problems facing the National Health Service today have been exacerbated by inappropriate provision of beds. This paper describes a method used by one regional health authority to provide more relevant indications of likely requirements by specialty. Existing demands and their projected trends as indicated by hospital activity statistics were used as surrogates for need in establishing required future admission levels, adjustments being made where demand had evidently been depressed by lack of facilities. An analysis of existing and projected levels of the use of beds enabled the number of beds required to be determined. Analyses were applied to seven groups of specialties, 1976 being the base year. The results consist of a table giving the estimated number of beds required per 1,000 population for strategic planning for each of the seven groups of specialties and for each of 12 age and sex groups. The results represent the best estimate of future bed requirements, though unforeseen changes in clinical practice could substantially alter the shape of trends that have been extrapolated. Annual monitoring will be used to give early warning of such changes. The importance of flexibility in the use of beds in emphasized.

39. JOHNSON, R. L. **Hospital buildings have few alternative uses.** *Hospital Progress*, St. Louis, Mo., 1979, Oct., vol. 60, no. 10, pp. 42-44, 70.

Converting a general hospital, or part of one, to another use is usually fraught with problems. Conversion to a long-stay facility results in low occupancy and lack of space for patient activities. The adaption of a school of nursing to administrative

uses may, however, be satisfactory. The decrease of bed numbers in hospitals increases hospital costs. The only way to average out occupancy rates is for hospitals to 'swap' specialties, but this can cause inconvenience to staff and patients. United States government guidelines call for beds to be reduced to four per 1,000 population with an occupancy rate of 80 per cent. However, the increasing population will cause occupancy rates to rise, forcing a decrease in patient days, and even bed shortages in highly populated areas. The author considers that if administrators hold on to surplus beds without rushing to make closures, the guidelines should eventually be complied with in most areas.

APPOINTMENT SYSTEMS, WAITING LISTS

See Abstract Nos. 44, 123

ELECTRONIC DATA PROCESSING

See also Abstract Nos. 49, 98, 105, 106, 109, 111, 112, 132, 137, 140

40. KOBERNICK, S. D., HENDRY, P. A. and GREER, J. E. **Co-ordinated computer reporting of microbiology data in the clinical laboratory.** *American Journal of Clinical Pathology*, Philadelphia, Pa., 1979, Sept., vol. 72, no. 3, pp. 444-451.

The Department of Laboratory Medicine, Sinai Hospital of Detroit, Mich., performs 2,050,000 test procedures annually. The laboratory computer is a PDP 11/45. This paper describes how microbiology results are incorporated into a single computerized report that also includes all other laboratory results for each patient in the hospital. Including the microbiology results in this way allows provision of a consolidated flow sheet of all laboratory work on each chart, replacing the myriad single-sheet reports so common to manual systems. The results are tabulated, and are easily read by clinicians after some experience. The system also allows communication of updated results daily to clinicians, and monitoring of infectious diseases in the hospital.

41. COVVEY, H. D. and MCALISTER, N. H. **Computer-assisted medicine: breathing life into hardware.** *Canadian Medical Association Journal*, Ottawa, 1979, Nov. 17, vol. 121, no. 10, pp. 1408-1410, 1412, 1413.

If a computer system is to do its job its hardware must be selected with care. However, hardware is only part of a computer solution; it is the software (programming) that brings computing machinery to life. Operating systems can be divided into somewhat artificial categories: batch, multistream batch, time-shared and real-time operating systems. This paper discusses a few of the issues involved in selecting an operating system.

42. LÖNNEKER, W. Datenverarbeitungs-Organisation der Wiener städtischen Krankenanstalten. **[The organization of data processing in the municipal hospitals of Vienna.]** *Krankenhaus*, Stuttgart, 1979, Oct., vol. 71, no. 10, pp. 375-378.

There are in Vienna 17 acute municipal hospitals with a total of 11,000 beds plus 3,800 psychiatric hospital beds and 6,000 beds in nursing homes. A central electronic

data processing system was inaugurated in 1977 which was at first concerned only with bed allocation: it became the co-ordinating centre for admissions via the emergency and ambulance services, for general practitioner referrals and for the admission via out-patient departments. The system is now being extended to serve as an integrated patient information centre. At present five Vienna hospitals are taking part and it is expected that all other hospitals will eventually participate. Details are given of the equipment used and of the organization of the system.

43. SAUTER, K. **Data security in health information systems by applying software techniques.** *Methods of Information in Medicine*, Stuttgart, 1979, Oct., vol. 18, no. 4, pp. 214-222.

The increasing threats to data security have to be met by an appropriate set of hardware precautions, organizational procedures and software measures. Design principles and software construction rules are presented first, ranging from user identification and authentication to access control, auditing and threat monitoring. Cryptographic techniques are proposed as a powerful tool for protecting data during both physical storage and transmission. The main issues applying to health data bases and their specific security aspects are summarized in the appendix.

44. FLEMING, J. J. **A medical information system—seven years later.** *Hospital Forum*, San Francisco, Calif., 1979, Sept./Oct., vol. 22, no. 6, pp. 8, 10-12.

El Camino Hospital, Mountain View, Calif., installed a hospital-wide medical information system (Technician's Matrix M15) in 1972. The configuration of the system is outlined and its applications are explained by following the hospital stay of a typical patient. Hospital staff have accepted the system and as they have become more accustomed to it, their expectations of it have grown. The system has enabled the quality of care to improve and has been proved to be cost-effective.

45. KLEINECKE, R., and others. Das Einrichtungsregister als Mittel und Voraussetzung für die Rationalisierung des Berichtswesens im Gesundheits—und Sozialwesen. **[Medical facility registers as a means and condition of rationalizing reporting in public health and social services.]** *Zeitschrift für die gesamte Hygiene und ihre Grenzebiete*, Berlin, 1979, no. 8, pp. 618-623.

A central registry of information on health and social service facilities in East Germany, based on a third generation computer system, is to come into use during 1979. Details are given in this paper of the arrangements for the collection, storage and retrieval of information. The aim is to provide a uniform system of data recording, to avoid unnecessary duplication, to simplify and speed up the supply of information, and to develop uniform statistical reports.

46. BAUERNFEIND, U. Der eigene Computer ist flexibler und wirtschaftlicher. **[The hospital's own computer system is more flexible and economic.]** *Krankenhaus*, Stuttgart, 1979, Oct., vol. 71, no. 10, pp. 378-380.

In West Germany more and more hospitals are setting up their own computer systems since such installations are found to have organizational and economic advantages. The system installed at St. Antonius Hospital at Eschweiler (near Aachen),

a 470-bed teaching hospital is described. The computer is an MA1 600 and there are five screen terminals. The individual programmes are: in-patient accounting; out-patient accounting; pharmacy stores; accounts; wages and salaries; and cost/services accounting. All these programmes are now in use with the exception of pharmacy stores which it is hoped will operate from early 1980. The use of the computer has involved no great problems; terminals are operated by staff with no special computer training. The system is fully used and has proved satisfactory.

LIBRARIES

See also Abstract No. 102

47. TABOR, R. B. **Professional knowledge and the nurse.** *Nursing Times*, London, 1979, Nov. 15, vol. 75, no. 46, pp. 1983-1984.

There has been little constructive thinking by either the Department of Health and Social Security (DHSS) or the General Nursing Council (GNC) about the role and use of libraries for nursing. The growth of multidisciplinary patient care suggests that all health care professionals should have equal access to medical knowledge. It would seem obvious, therefore, that library services should be developed at district level. Four Regions, Wessex, Oxford, South-East and South-West Thames, now have a regional library operating or developing. However, many regional libraries are short of staff and finance. Like all members of the health care team, the nurse should know how to use and enjoy using the many information services available. The DHSS and the GNC must realise that libraries are needed by all National Health Service (NHS) staff. Each region should be required to appoint a regional librarian to co-ordinate a regional library system. At district level, librarians will also be needed to provide an integrated library service to nurses and other NHS staff both in hospitals and in the community.

MEDICAL RECORDS

See also Abstract Nos. 45, 109, 112, 132, 141

48. HLYNKA, J. N., SMITH, W. E. and BRODIE, D. C. **Developing drug-use profiles from drug-charge records.** *American Journal of Hospital Pharmacy*, Washington, D.C., 1979, Oct., vol. 36, no. 10, pp. 1347-1351.

The potential for developing a drug-use profile from drug-charge records was studied at an 830-bed hospital. Patient drug charges were reviewed retrospectively for one year (1975) to identify: (i) which key drugs accounted for a high percentage of cost and usage; (ii) where key drugs were used within the hospital; (iii) how they were used; and (iv) who were the chief prescribers. Of the drugs used, eight per cent accounted for 80 per cent of total drug cost. Seven drug groups (10 per cent of the total drug groups) appeared in the top 10 of both drug cost and quantity categories. Six individual drugs also appeared in the top 10 of both categories. According to cost, cephalosporin antibiotics were ranked first among drug groups but were sixth according to quantity. Analgesics-antipyretics were ranked first among drug groups by quantity and second by cost. Cephalothin was ranked first among individual drugs by cost and was not in

the top 10 in quantity. Diazepam was ranked first among individual drugs by quantity and third by cost. Patients' drug-charge records can be used effectively to generate drug-use profiles for on-going drug use review, quality assurance and cost containment programmes.

49. LOPEZ, L. and YOUNG, C. **Hospital information systems: one hospital's planning experience.** *Hospital Forum*, San Francisco, Calif., 1979, Sept./Oct., vol. 22, no. 6, pp. 15-17.

A comprehensive hospital information system (HIS) project was initiated at Stanford University Hospital in May 1978. This paper describes how the system was planned in three phases: (i) systems overview, in which the current level of computer activities within the hospital was assessed; (ii) creation of a planning document, assessment of the needs of user departments, and analysis of potential benefits; and (iii) systems selection. As a result of their experience, the authors have identified four factors which are critical for successful planning: problem definition, resource commitment, distinct phases for planning efforts, and systems justification.

50. GRAYSON, M. A. **How state medical record access laws are working.** *Hospital Medical Staff*, Chicago, Ill., 1979, Sept., vol. 8, no. 9, pp. 10-15.

Most state courts in the United States have set precedents that petitioning patients have the right to review their medical records unless medical reasons dictate otherwise. However, several states have short-circuited the judicial route and passed laws allowing a patient to review his medical record directly or through an agent, such as a lawyer. The laws of 13 states are reviewed, with particular reference to the variations between them. Although hospitals report no major problems, compliance does create minor but bothersome administrative difficulties. The biggest fear—increase in the number of malpractice suits—has not been realized. In fact there have been fewer informed consent claims, and earlier, more open correction of mistakes. Possible federal legislation on the subject is discussed briefly.

HOSPITAL STATISTICS

See also Abstract Nos. 145, 147

51. BISBEE, G. E. and BACHOFER, H. J. **AHA surveys major source of hospital data.** *Hospitals*, Chicago, Ill., 1979, Sept. 16, vol. 53, no. 18, pp. 129, 130, 132, 135.

The two major sources of data held by the American Hospital Association are the Annual Survey of Hospitals and the National Hospital Panel Survey. The former provides a cross-sectional view of all hospitals annually, while the latter collects monthly data from a representative sample of hospitals. There are two basic uses for hospital data: (i) monitoring of performance; and (ii) provision of a comparative study of different areas or types of hospitals. The Panel Survey is most useful for (i) and the Annual Survey for (ii). Both surveys have been used since 1978 to track the progress of the effort to reduce hospital costs. The Panel Survey supplies data on national and regional trends, while the Annual Survey can be used to study the increase and decrease in hospital expenses in individual states, including those with mandatory

regulation of hospital costs. The difference in the purpose of the two surveys accounts for the differences in the data presented. Together they provide a data base which is extremely useful in the analysis of hospital activities and performance.

52. OFFICE OF HEALTH ECONOMICS. **Compendium of health statistics.** 3rd edition. London, Office of Health Economics, 1979, looseleaf. £8.50

This is the third edition of this compendium; it excludes information on privately financed health care and personal social services provided by local authorities. There are six principal sections: (i) financing of the National Health Service, including European comparisons; (ii) staff; (iii) hospital services; (iv) family practitioner services (including pharmaceutical, dental and ophthalmic services); (v) mortality; and (vi) morbidity. The information is clearly presented, with numerous graphs and tables.

PUBLIC RELATIONS

53. COWSERT, W. E. **Open meetings without fear.** *Trustee*, Chicago, Ill., 1979, Sept., vol. 32, no. 9, pp. 47, 49.

Meetings of hospital governing boards open to the press and public can be one of the best public relations tools that a hospital has. This paper presents practical suggestions to guide the board and chief executive officer in preparing for and conducting open meetings.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

See also Abstract Nos. 43, 50, 85

54. DICKMAN, R. L. **Alternatives to defensive medicine.** *Hospital Medical Staff*, Chicago, Ill., 1979, Sept., vol. 8, no. 9, pp. 2-7.

In 1975 the malpractice problem in the United States reached crisis proportions. Hospitals developed complicated contingency plans for their full-time physicians who were covered by the hospitals' malpractice insurance. Although this particular crisis appears to have lessened, the issues that precipitated it remain. One mechanism believed to be effective in handling the malpractice threat has been the practice of what is commonly called defensive medicine—the ordering of tests or the performance of procedures specifically for the purpose of avoiding valid malpractice litigation. This paper questions the ethics of defensive medicine, as distinguished from unnecessary testing for reasons other than fear of malpractice suits, and the usefulness its practice affords the physician in court. Physicians, patients and society are all adversely affected by its practice. Acceptable alternatives that can be used to minimize malpractice problems include: careful scrutiny of clinical decision making; development of clear minimum indicators for excluding certain tests and procedures; attention by physicians to their relationship with patients; detailed documentation of care in medical records; and improved communication between the medical profession and the community.

FINANCE AND ACCOUNTING

FINANCE

See also Abstract Nos. 12, 117

55. NORSTEIN, M. Avdelingsregnskapet som styringssystem. **[Ward budgeting as an administrative system.]** *Norsk Sykehustidende*, Oslo, 1979, vol. 52, no. 8, pp. 2-4.

A system of ward budgeting, which has been in use at Haukeland Hospital, Norway, since 1976 is described and examples are given of its operation. The system compares estimated expenditure, broken down under main and sub-heads, with actual expenditure. The figures provide a means of comparing performance with other hospitals and also keeps staff informed of the financial position. On the basis of experience at Haukeland advice is given which should help other hospitals intending to introduce a similar system. It is important to keep all concerned fully informed about such a project and to introduce it gradually. Monthly reports should be up-to-date and be ready within 14 days of the end of the month concerned.

56. GILLESPIE, I. E. **Budgets for clinicians? Desirable and/or practical.** *Hospital and Health Services Review*, London, 1979, Dec., vol. 75, no. 12, pp. 428-431.

To explore the advantages and disadvantages of clinicians having greater budgetary responsibility, a seminar attended by 10 consultants and 10 finance officers was arranged. Its proceedings are summarized. The purpose of this paper is to analyze in more detail the point of view of the average clinician, who by training and experience as well as by inner motivation, is mainly concerned with the individual patient. It does this by discussing a number of questions. Is it our aim to have our medicine practised using the cheapest raw materials? Are all the sectors of medicine the same in the appropriateness of handling responsibility for their finances? Why do consultants in the fields of general medicine and general surgery fear direct financial responsibility? What is the yardstick of the quality of care? How does the policy of clinical budgeting affect the financing of expensive developments? Is there not a fear of fossilizing medical procedures if norms begin to be widely applied? The matter of clinical autonomy and the instruction of medical students in the financial and other administrative implications of their clinical work are also discussed.

COSTS

See also Abstract Nos. 48, 62, 87, 148

57. ASHFORD, J. R. and BUTTS, M. S. **The structure of hospital in-patient costs.** In: *Mixed Communications*, edited by G. McLachlan, Oxford, OUP, 1979, pp. 43-63.

This essay is concerned with the use of statistical models and methods to determine the structure and magnitude of the costs of hospital in-patient care. On the basis of the costs, resources, and activities of 402 hospitals in the Thames Regions (1975/6), an

empirical model is derived. According to this model, the total hospital cost may be expressed as the sum of the costs of the beds provided in each of six groups of specialties, together with the costs of treating patients in excess of the prevailing average number per bed in the acute specialties. Economies and diseconomies of scale in terms of bed provision were found in the medical, psychiatric, and maternity specialty groups. The authors believe that government guidelines are simplistic and arbitrary.

58. WINTER, M. Alternativen zur Krankenhaus-finanzierung. **[Alternatives for the financing of hospitals.]** *Krankenhaus-Umschau*, Kulmbach, 1979, Aug., vol. 48, no. 8, pp. 645-648.

Hospital costs in West Germany are calculated on a 'global' cost per patient day basis. This makes it difficult for health insurance bodies and patients to realize what is being paid for different categories of hospital service; a better understanding of what money is being spent on is an essential prerequisite for cost reduction. Hospital services divide into four main groups: 'hotel' services; nursing; normal diagnosis and treatment; and special diagnostic and therapeutic procedures. It is proposed that these four items should be separately priced to ensure that health insurance bodies and patients are better informed on costs.

59. MULHEARN, J. and EURENIUS, K. **A veterans administration initiative in health care cost control.** *Journal of the American Medical Association*, Chicago, Ill., 1979, Sept. 21, vol. 242, no. 12, pp. 1285-1287.

The United State's Veterans Administration's (VA) Department of Medicine and Surgery is under continuous pressure from central government, Congress and the public to provide greater accountability and cost-effectiveness for its annual budget of at least five billion dollars. The VA is currently evaluating in 10 of its 172 medical centres a new system of resource allocation and financial management, known as 'multilevel' care. The object is to match patients' varying medical needs with different levels of resources. The system consists of two sections: (i) patient care; and (ii) financial management. The patient care section has eight parts: (i) triage; (ii) assessment criteria; (iii) correct placement procedures; (iv) appropriate number of care levels; (v) continuing assessment; (vi) discharge planning; (vii) monitoring procedures; and (viii) patient and staff education programmes. The financial management section comprises a new cost monitoring and budgeting mechanism. The two sections are linked in that cost per day by level of care will be the cost control factor. The system will be assessed in 1980 for its usefulness regarding patient load projections, staffing ratios and resource allocation.

60. POEL, L. C. J. VAN DER and RIGTER, E. H. P. W. Enkele aspecten omtrent structuur en functie van ziekenhuisverpleegtarieven. **[Some aspects of hospital care cost structure.]** *Ziekenhuis*, Utrecht, 1979, Sept. 19, vol. 9, no. 18, pp. 440-446.

The primary function of hospital charges is to cover the costs of the services. The present cost structure is built up of two components: (i) charges per hospital day; (ii) charges for separate functions in relation to their costs. These may be influenced by technical developments, which may result in over-capacity, but at present this has been

kept to an acceptable level. If calculated into overall hospital charges, the resulting cost differences are not significant. If, however, these costs are eliminated to allow for comparison, the remaining differences in hospital charges will indicate differences in efficiency. Regarding technical aspects of the structure, the introduction of a third component, i.e. charges for polyclinical functions, is suggested. On managerial aspects a distinction is made between control of running costs and control of volume of services. However, a particular form of care cost structure will not be an alternative to managerial decision.

61. CHABRUN-ROBERT, C. La croissance des dépenses de santé: un fait de société. **[The growth of health costs: a social phenomenon.]** *Médicine Hospitalière*, Paris, 1979, Sept./Oct., vol. 15, no. 4, pp. 147-149.

The French Government has recently introduced certain measures in an effort to control rising expenditure on health; these include controls on the number of medical students and a freeze on hospital construction. The author discusses these measures in the light of a report which postulates that: (i) the growth in health expenditure is a world-wide phenomenon linked to the development of industrialized societies; (ii) a freeze on hospital construction will reinforce existing inequalities between one area and another; (iii) if fees for individual services are held down, the number of services will increase; and (iv) there is no guarantee that increased expenditure on prevention will reduce costs. A capitation fee for doctors would appear to be one satisfactory solution, but doctors' incomes must reflect the status conferred on them by society. The French health insurance system reflects policies based on the patient's freedom of choice, the doctor's freedom to prescribe as he thinks fit, and collective responsibility for health insurance risks. To have any chance of success, policies directed at controlling health expenditure must be consistent with general social trends, since the increase in this expenditure reflects a particular trend in contemporary society.

HOSPITAL ACCOUNTING

62. Rapport d'évaluation des expériences de tarification hospitalière à l'Assistance Publique à Paris. **[An evaluation of the hospital costing experiments of the Assistance Publique in Paris.]** *Hôpital à Paris*, Paris, 1979, July/Aug., no. 52, supplement.

Two new systems of hospital charges have been used on a trial basis in Assistance Publique hospitals for a period of one year. The first, the 'split' day charge, is made up of: (i) a fixed premium to cover admission costs, which is independent of the length of the patient's stay; (ii) a medical charge, established as a function of the actual cost of the services provided, and including payment for the medical staff; and (iii) a residual day-charge which is intended to cover all other costs, which is equal to about 70 per cent of the total cost, and decreases as a function of length of stay. The second system tested was the 'global' budget. In this case the four main health insurance funds in the region pay the hospital a fixed annual amount, based on the average contribution made by these funds on behalf of their members in the previous year. This is paid to the hospital in 12 monthly instalments. The results of the two trials are analysed in considerable detail and the advantages and disadvantages of each system discussed. The main conclusion drawn was that neither system was intrinsically less inflationary than the traditional method of charging patients.

63. PAFFEN, K. Systematik einer Kosten-und Leistungsrechnung in Krankenhausbetrieben. **[Systematics of cost and efficiency accounting in hospital management.]** *Krankenhaus*, Stuttgart, 1979, Oct., vol. 71, no. 10, pp. 364-368.

Recent West German legislation on hospital accounting aims to ensure a uniform system for German hospitals. This paper sets out the principles on which a system for cost accounting should be based.

SUPPLIES AND STORES

SUPPLIES

64. ROSSUM, T. VAN and SIDEL, L. **Exchange carts on a budget.** *Dimensions in Health Service*, Ottawa, 1979, Oct., vol. 56, no. 10, pp. 16, 18.

In a study at Montreal General Hospital, the existing requisition ordering system for medical and surgical supplies was analyzed, together with a par level restocking system and an exchange trolley system. An exchange trolley system proved the cheapest to operate, but requires a large capital outlay for the special trolleys. To minimize the use of these, a standardized exchange trolley was developed for each of three types of unit, medical, surgical and mixed surgical. With these it was possible to reduce the number of trolleys required from two to one per ward plus a few extras required in the exchange process. The procedure followed is outlined. The total number of trolleys required was reduced from 34 to 24, with a consequent saving of 30 per cent in capital cost and 55 per cent in storage space for dormant trolleys. The system has also resulted in a 60 per cent reduction in stock held on the wards and a reduction in the supply room stock.

ECONOMIC USE OF SUPPLIES, DISPOSABLES

See Abstract No. 68

STORES

65. D'ERAMO, D. and RANGE, R. P. **Storeroom procedures that conserve assets.** *Hospital Progress*, St. Louis, Mo., 1979, Oct., vol. 60, no. 10, pp. 56-59.

Before an inventory can be developed, a stock catalogue, including stock number, generic description, unit of issue and location code, must be established. Storerooms must be carefully planned, and should include environmental control and restricted access to prevent damage and loss of stock respectively. Physical inventories should be taken regularly. There should be two types of requisition systems, regular weekly orders and over-the-counter orders, the former being prepared by the use of the fixed shelf or the cart system. Effective inventory control of centralized hospital storage can provide an efficient service to all hospital departments and help contain costs. The type of inventory system chosen will depend on: (i) the type of items stocked; (ii) the hospital's location; and (iii) the use of manual or automated systems. The administrator

can choose from three conceptual models: (i) the minimum/maximum model, widely used in manual systems; (ii) economic order quantity, used in large computer systems; and (iii) Pareto's Law, which involves distribution theory and is easily understood by employees.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

66. UNKLESBAY, N. and BALSLEY, M. **Food service researched in special project.** *Hospitals*, Chicago, Ill., 1979, Oct. 16, vol. 53, no. 20, pp. 113-117.

New methods in hospital catering schemes have made it possible to increase efficiency and productivity in large-scale operations. However, questions have been raised about food hygiene, safety, nutritive value and, more recently, energy conservation. These considerations are being examined in a research project in the North Central Region of the United States. This paper summarizes some of the research that has been completed or that is in progress which may be of special interest to hospital catering administrators in the areas of food hygiene, food quality and energy conservation.

DIETETICS IN THE HOSPITAL

See also Abstract No. 119

67. CALBECK, D. C., VADEN, A. G. and VADEN, R. E. **Work-related values and satisfactions.** *Journal of the American Dietetic Association*, Chicago, Ill., 1979, Oct., vol. 75, no. 4, pp. 434-440.

A total of 323 hospital dietitians completed a survey in three parts giving: (i) information about the respondent and the employing hospital; (ii) a job description index, designed to measure perceived job satisfaction; and (iii) a work values scale. The results are compared with previously reported studies of non-professional catering staff. The analysis indicated that dietitians are more satisfied with all components of their job—except promotion—especially with the work itself, co-workers, and pay. Directors of departments were the most satisfied overall, perhaps because of greater scope of their work and authority. Relative dissatisfaction with perceived promotional opportunities might be some cause for concern in the profession. The dietitians also had higher drive and ambition and a stronger competitive spirit in relation to their work. The data reflect a stronger commitment to work and to individual effort on the part of the dietitians.

WASHING UP, CLEANING OF EQUIPMENT

68. CHALLIS, R. **Cost and bacteriological implications of replacing tea-towels and dishcloths with paper.** *Contact*, London, 1979, Sept., no. 12, pp. 1-3.

During a six-month pilot scheme, in the Grampian Health Board area, two types of paper towels were compared with each other and with traditional linen tea-towels in

three categories of ward kitchens: those with dishwashing/drying machines (because they also used tea-towels), those with sterilizing sinks, and those with ordinary sinks. The type of paper initially less expensive, proved to be more costly in the long run. Use of both types of paper, and linen, was higher in areas without sterilizing sinks or dishwashing machines. The ward specialty did not appear to have any influence on the amount of paper used. Although domestic staff preferred linen, it was thought that if paper towels were carefully introduced they should become familiar with the change reasonably quickly. Storage and disposal presented no problems. Cost analysis indicated a saving of £2,683 per year in the area if the less costly paper towels were introduced. While high counts of a mixed bacterial flora were found on samples taken from in-use linen tea-towels and dishcloths, none were found when paper towels were in use.

LAUNDRIES AND LINEN SERVICE

69. **Preparing for the private hospital sector.** *Laundry and Cleaning News*, London, 1979, Nov. 16, vol. 1, no. 23, pp. 20, 21, 25.

If the trend towards private hospital care in Great Britain continues, there will be a growing demand for private linen care, specially tailored for this sector. It has become evident that centralized linen services have not been as efficient or as economical as was expected initially. There is much to be learned from the Netherlands, where contracting hospital linen to private launderers is common. The launderer enjoys a long contract of not less than five years and some assistance towards the cost of capital equipment. The capital cost for a rental launderer is high. A typical company operating on both contract and rental serves five hospitals of 150 beds each, the topping-up system being used. Services generally are expanding and there is a growing demand for more expensive services, such as sterilized surgical packs.

LAUNDRIES

70. KOLLER, W. Schwerpunkte der Hygiene in Krankenhauswäschereien. **[Important aspects of hospital laundry hygiene.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1979, Sept., vol. 20, no. 9, pp. 447, 448, 451, 452, 454, 455.

This paper sets out guidelines for hospital laundries with particular reference to the requirements of hygiene. The following aspects are covered: microbiological and epidemiological obligations; the organization of hygiene procedures: health surveillance of staff; treatment of soiled linen; suitable hospital laundry procedures; and disinfection and cleaning of working surfaces, floors, and equipment. A check list is also given of points to be borne in mind under the following main heads: information and motivation; cleanliness of staff; sanitary and other staff facilities; technical equipment; technical aids; and cleaning procedures.

71. NIEUWENHUIS, K. J. **Hospital laundering in the Netherlands.** *Laundry and Cleaning News*, London, 1979, Oct. 5, vol. 1, no. 20, pp. 51, 54, 55; Nov. 6, vol. 1, no. 23, pp. 50, 51.

In 1972, 70 per cent of the linen from medical care establishments in the Netherlands

was washed at a commercial laundry or hired from a linen hirer. Since then, this percentage has increased still further. This trend is not solely for financial reasons; the linen service is regarded as a secondary task, diverting attention from the primary task—care of the sick. Consultants from the Institute of Cleaning Techniques make regular visits to both commercial and hospital establishments to give advice. In the interests of rationalization, commercial laundries have become increasingly specialized. The ideal is considered to be a laundry processing exclusively 40 tonnes of hospital linen per week. The Institute also provides training courses. A Hospital Linen Quality Guarantee Association has now been formed with the object of offering medical establishments a guaranteed standard of linen processing.

HYGIENE IN THE HOSPITAL

See also Abstract Nos. 66, 70

72. Utredning fra utvalget for utredning av problemene forbundet med sykehus-infeksjoner. **[Report of a committee on problems connected with hospital infections.]** *Sykehuset*, Oslo, 1979, vol. 42, no. 5, pp. 429-447.

This is the report of a working party set up by the Norwegian Board of Health in October 1975. Its terms of reference were to 'collect, collate and systematize existing material on hygiene in health institutions and to work out model procedures'. After surveying existing practices in the prevention of hospital infections the report goes on to make recommendations for procedures, organization and staffing at national, regional, county and district levels. It recommends the setting up of hygiene committees and the appointment of specialist hygiene medical officers, and hygiene nurses who should be given special training. It is envisaged that 50 to 60 hygiene nurses and five full-time hygiene medical officers would be required. Details are given of the proposed composition and duties of hygiene committees, and of guidelines for the specialist medical officers and nurses. A training syllabus for hygiene nurses is also included.

HOSPITAL INFECTIONS

See also Abstract No. 128

73. WALKER, A. M., JICK, H. and PORTER, J. **Drug-related superinfection in hospitalized patients.** *Journal of the American Medical Association*, Chicago, Ill., 1979, Sept. 21, vol. 242, no. 12, pp. 1273-1275.

The records of 14,077 patients in 22 hospitals were reviewed for the occurrence of super-infection during a course of antibiotic therapy received while in hospital. Such infection occurred in 95 patients during the drug therapy. Older patients and patients who were immunosuppressed were slightly more at risk. The majority of infections were of the yeast and fungal type and serious cases numbered less than one per 1,000 patients treated. This study shows that, while the risk of drug-related super-infection cannot be dismissed, it is an infrequent and usually minor problem.

74. HIRSCH, H. A. and others. Nosokomiale Infektionen. **[Hospital infections.]** *Deutsche Medizinische Wochenschrift*, Stuttgart, 1979, Nov. 2, vol. 104, no. 44, pp. 1559-1563.

As part of a prospective study of the use of nurses specially trained in hygiene in the department of obstetrics and gynaecology of the Tübingen University Hospital it was recorded that, over the three-year period from April 1976 to March 1979, hospital infections were found in 2,546 of a total of 18,897 patients. This incidence was 13.5 per cent and was predominantly asymptomatic. Incidence was highest after major surgery and lowest in pregnant and post-natal patients, and after minor surgery. The introduction of controls, including hygiene measures and the use of specially trained nurses in wards and treatment areas, reduced the incidence of all hospital infections by 48.1 per cent and of urinary tract infections by 42.7 per cent.

75. BENDALL, M. J. and GRÜNEBERG, R. N. **An outbreak of infection caused by trimethoprim-resistant coliform bacilli in a geriatric unit.** *Age and Ageing*, London, 1979, Nov., vol. 8, no. 4, pp. 231-236.

During 1971-72 at St. Pancras Hospital, London, increasing numbers of aerobic Gram-negative coliform bacilli which was resistant to trimethoprim (TMP) were isolated from clinical specimens, particularly from urine samples. In July and August 1972 all patients in the hospital were screened for rectal carriage of TMP-resistant organisms. Of the total of 49 carriers, 41 were in geriatric wards; similar screening in March and April 1973 produced essentially similar results. Factors predisposing to carriage of TMP-resistant organisms were related to instrumentation or catheterization, urinary tract abnormalities, benign or malignant prostatic enlargement, urinary or faecal incontinence, diabetes mellitus, and previous urinary-tract infections. Restriction of the use of sulphonamide, ampicillin and co-trimoxazole eliminated the carrier state from all but three of the 75 patients in the four geriatric wards. The time interval for the newly introduced antibiotic restriction policy to produce the maximum effect was about nine months.

76. GERDING, D. N. and others. **Nosocomial multiply resistant *Klebsiella pneumoniae*: epidemiology of an outbreak of apparent index case origin.** *Antimicrobial Agents and Chemotherapy*, Washington, D.C., 1979, April, vol. 15, no. 4, pp. 608-615.

Between 1 November 1974 and 5 March 1975, no multiply resistant *Klebsiella* were isolated by the laboratory of the Veterans Administration Medical Center, Minneapolis, Minn. On 5 March 1975 a 58-year-old chronic alcoholic was transferred from a nursing home; a urine culture obtained on the second hospital day grew *K. pneumoniae* resistant to gentamicin, chloramphonicol, cephalothin, kanamycin and ampicillin. By March 1977, a total of 66 infected or colonized patients were observed. The infected patients were seriously ill, had long hospital stays (mean 67 days), and were in close geographic proximity to other cases. Compared with controls, they more frequently had antibiotic treatment and urinary catheters, but not respiratory instrumentation, nasogastric tubes or antacid treatment. Although the outbreak appeared to be controlled by the use of isolation techniques, a simultaneous increase in gentamicin resistance among other gram-negative organisms was observed.

SOURCES OF INFECTION

See also Abstract Nos. 76, 104

77. DONOWITZ, L. G. and others. *Serratia marcescens* **bacteremia from contaminated pressure transducers.** *Journal of the American Medical Association*, Chicago, Ill., 1979, Oct. 19, vol. 242, no. 16, pp. 1749-1751.

Primary *serratia marcescens* bacteremia developed in 17 patients in an intensive care unit at the University of Virginia Hospital, following exposure to pressure monitoring transducers. A study showed that all the transducer heads were contaminated with *serratia marcescens* and culturing of 110 pressure monitoring lines disclosed a 24 per cent rate of contamination with the same organism. An investigation was carried out to find the source of the infection. Hand contamination occurred when the dome of the transducer was screwed on to the head. Contamination of five out of eight monitoring lines showed that transmission of bacteria from the head to the patient side of the apparatus occurs when pressure monitoring is initially established. Disinfection of the transducer heads with glutaraldehyde not only decontaminated the pressure monitoring lines but also controlled the outbreak.

PREVENTION AND CONTROL

See also Abstract Nos. 24, 68, 103, 120, 121

78. WALTERS, E. M., editor. **Papers presented to the annual symposium, Infection Control Nurses' Association, the University of Kent at Canterbury, September 1978.** Infection Control Nurses Association, [1979], 69pp.

Infection control nursing is an increasingly important specialization and covers a considerable field, as shown by the 24 papers presented at the annual symposium. Amongst the papers relating to public health is a description of the Communicable Disease Surveillance Centre in London and an explanation of emergency policy for exotic diseases. There are three papers on the related subjects of food hygiene, cockroaches and kitchen hygiene in the National Health Service. Two papers deal with infections of renal patients and two with sexually transmitted diseases. The remaining papers cover a wide range of topics but all relate to infection control and prevention.

79. EXNER, M. Zur Hygiene von Krankenhaus-Bewegungsbädern. **[The hygiene of exercise bathing pools in hospitals.]** *Krankenhaus*, Stuttgart, 1979, Oct., vol. 71, no. 10, pp. 380-385.

This is a review of the literature on the subject of the hygiene of exercise baths in hospitals; there are 52 references to the relevant literature (mainly German). Such baths are considered to present an 'average' infection risk. To reduce infection the addition of flocculents, and regular cleaning of filters and checking of chloride concentrations by trained staff are necessary. Bacteriological control and determination of *Escherichia Coli* concentrations must be carried out. It is also necessary to carry out regular disinfection and cleaning of the area surrounding the bath. Infection with

fungi and warts must be controlled by disinfection and drying of the feet after bathing, by excluding infected persons and by the wearing of bathing shoes.

SAFETY MEASURES

ACCIDENTS, GENERALLY

See Abstract Nos. 27, 116

FIRES AND FIRE PREVENTION

80. **Fire safety in health and social services buildings.** *Design for Special Needs*, London, 1979, Jan./April, pp. 5-9.

This is the report of a seminar held at the King's Fund Centre in February 1979. Mr. Ceri Davies, assistant chief architect of the Department of Health and Social Security, introduced a new document, *Fire safety in health buildings: draft hospital technical memorandum*, to be published shortly. A memorandum dealing with fire safety in residential homes is also being prepared. Mr. Davies outlined the principal problems of fire safety in hospitals and homes, including those concerned with heavy doors, furniture and staircases. A new concept of dividing the hospital into fire compartments and sub-compartments was described. A number of participants took part in the discussion which followed. Points raised included: (i) the use of lifts in fires; (ii) the need for constructional elements to be tested in actual fire conditions; (iii) staff shortages in fire emergencies; and (iv) the type of fire precautions needed in small residential homes. Several fire upgrading programmes were described by participants and the problem of reconciling quality of living with a high fire safety standard dominated the final general discussion. A list of those attending the seminar is given.

PLANNING FOR MASS EMERGENCIES

See Abstract No. 100

THE PATIENT

WELFARE OF THE PATIENT

See also Abstract Nos. 126, 127, 149

81. HENLEY, A. **Asian patients in hospital and at home.** London, King Edward's Hospital Fund for London, 1979, [vii], 188pp. £5.50

Hospitals in nearly every large town in Britain are now caring for Asian patients from India, Pakistan, Bangladesh and East Africa. Cultural and linguistic difficulties are examined with chapters on clothes, personal hygiene, food and Asian names. A chapter on sickness and health explains some attitudes to illness, particularly the stigma of mental illness or physical handicap. There is an extensive chapter on Asian

languages and one on the language barrier which explains some of the misunderstandings which can occur.

82. SWINDON HEALTH DISTRICT. MANAGEMENT TEAM and SWINDON COMMUNITY HEALTH COUNCIL. **Survey of patients' opinions on selected hospital activities conducted during October at Princess Margaret Hospital Maternity Unit and Victoria Hospital.** Swindon, Swindon Health District, [1978], [iii], 68pp.

A considerable degree of satisfaction with the quality of care was shown by this survey, along with a number of problems that were already known. Additionally, however, a number of problems were revealed, in environmental matters and work practices, which had not previously been identified. A surprising degree of tolerance towards smoking was found among patients and some revisions were made to plans to ban smoking. The major source of complaint was the catering service, with under half the meals still being hot when they reached the patient. An example of the questionnaire is included in an appendix.

83. VICKERY, D. M. **Is it a change for the better?** *Hospitals*, Chicago, Ill., 1979, Oct. 1, vol. 53, no. 19, pp. 87-90.

The basic objective of all health education programmes is to effect voluntary behaviour changes with the ultimate goal of improving people's health. Consumer health education is here taken to include a broad group of activities, including many activities that others would call patient education, health information, health promotion, or simply health education. Possible conflict between the aims of health education and the promotion of hospitals' services is discussed. A number of programmes that have demonstrated the effectiveness of consumer health education are mentioned. Important principles in establishing a hospital health education programme include: participation of medical staff; use of outside advice; selection of major health problems as target areas; careful selection of the 'message'; and evaluation. The public's expectations of hospitals are changing. It is therefore inevitable that hospitals will change. Thus, a strong case can be made that expansion in the direction of consumer health education is a change for the better.

84. PALMER, B. **Patient education and drug therapy.** *Pharmaceutical Journal*, London, 1979, Dec. 1, pp. 562-566.

Since many patients discharged from the four medical wards of Bolton General Hospital are suffering from one or more chronic illnesses and are often on long-term therapy with several drugs, it was decided to carry out a project to improve patients' knowledge about the proper use of prescribed drugs. The project was separated into four sections: (i) better labelling; (ii) patient counselling by pharmacists; (iii) provision of information sheets and medicine record cards; and (iv) use of questionnaire to ascertain patients' wishes. Details of each section are given and examples of the new self-adhesive label, information sheet and medicine record card are reproduced. Replies to the questionnaire established that patients are very interested in knowing as much as possible about their treatment, although many realized that their understanding would be limited by their lack of knowledge of biological functions. The scheme required an extra pharmacist to undertake patient interviews and the time needed by a pharmacy technician to prepare the information sheets and medicine

record cards for issue. The project has shown that the pharmacist in the hospital is the logical person to provide further information about drugs and to educate patients in their use.

85. DIXON, E. **A study of litigation in America.** *NATNews*, Matlock, 1979, Oct., vol. 16, no. 10, pp. 16, 17, 20.

The author visited the United States to study the situation regarding litigation arising from malpractice suits, with special reference to surgery. Procedures in operating theatres vary from one hospital to another and staff working in operating theatres are not necessarily contracted to the hospital concerned. No two hospitals had the same policy regarding swab, instrument and needle counts, whilst the problem of incomplete consent by the patient is common in some hospitals. Viral hepatitis, type B, is becoming an occupational hazard for operating theatre staff and failure to meet government precautions can lead to negligence suits. Failure of a hospital to maintain educational standards consistent with safe patient care can also be a basis for litigation. United States hospitals paid just over one billion dollars in medical insurance premiums in 1977 and over 30 per cent of all malpractice suits refer to the operating theatre. The author considers that: (i) a mandatory count should be introduced into the operating theatre; and (ii) nurses should have greater legal freedom to work in expanding roles.

HOSPITAL SOCIAL WORK

86. NEUKIRCHEN, M. Über Erfahrungen mit dem Sozialdienst im Krankenhaus und seine Bedeutung aus internistischer Sicht. **[Hospital social service and its importance from the medical viewpoint.]** *Krankenhaus-Umschau*, Kulmbach, 1979, Aug., vol. 48, no. 8, pp. 658-659.

The 877-bed Detmold Hospital appointed a full-time social worker and since 1978 a part-time social worker has been employed (the German Association for Social Service recommends one social worker for every 300 beds). Their main duties are: (i) discussion with patients of personal problems and giving advice; (ii) preparation of patient for trouble-free discharge; and (iii) practical assistance during the period after discharge. Although very desirable, regular discussions with doctors, nurses and remedial gymnasts are not possible, but there are many examples of co-operation between patient, doctor and social worker. The social worker is normally called in only in very difficult cases; in many cases doctors perform duties which really come within the social workers' ambit (e.g. writing social histories and arranging admissions to after-care institutions).

TRANSPORT OF PATIENTS

See also Abstract No. 15

87. LIVERPOOL CENTRAL AND SOUTHERN DISTRICT COMMUNITY HEALTH COUNCIL, MERSEYSIDE CHILD POVERTY ACTION GROUP and BRITISH ASSOCIATION OF SOCIAL WORKERS (MERSEYSIDE BRANCH). **Fares to hospital: report of an investigation and guidelines to practice.** Birmingham, British Association of Social Workers, 1979, 68pp. £1.50

The creation of regional specialist units has increased the travelling costs of visitors

and can increase both the expense and the discomfort suffered by patients who have to travel; some patients are forced, because of the hospital's inaccessibility, to remain as in-patients as opposed to visiting as out-patients. At present the Department of Health and Social Security (DHSS) may help with visitors' fares, particularly if the applicant is on supplementary benefit, but generally relatives must rely on social workers to apply to charities for them. Patients, too, have no clear entitlement; hospital administrative staff or social workers may pay, but there is no clear ruling whether it is a DHSS or local responsibility. The authors recommend that patients at least should have a simple system to claim travel expenses above a certain amount.

88. MAYER, J. D. **Emergency medical service: delays, response time and survival.** *Medical Care*, Philadelphia, Pa., 1979, Aug., vol. 17, no. 8, pp. 818-827.

A major concern in planning emergency medical services in the United States has been the need to reduce ambulance response time, particularly where ambulances are not staffed by trained emergency medical technicians. The importance of response time as a determinant in patient survival is analyzed, using the emergency medical system in Seattle as a case study. To reduce the numbers of deaths in critical emergencies, an emergency unit should arrive well within five minutes and a paramedical unit within nine minutes. If response times are longer, additional units may need to be added to the system and routed to avoid traffic delays. However, even greater delays in responding to emergencies come from patients and bystanders. Programmes in Seattle and elsewhere to educate the public about symptoms of acute emergencies and the risks of delay have had a positive effect on survival from cardiac arrest.

HOSPITAL CARE

See also Abstract Nos. 31, 54, 60, 131, 141, 146

89. POULSEN, H. Regionalprogramm der medizinischen Versorgung. **[The regional medical care programme.]** *Krankenhaus-Umschau*, Kulmbach, 1979, Aug., vol. 48, no. 8, pp. 637-640.

A medical care programme is defined as 'a documented local or regional agreement on the best possible medical and social services for clearly defined health risks, disease symptoms and diseases'. It covers not only guidelines for diagnosis and treatment but also sets out duties of the various staff categories in relation to both in- and out-patient care. There is no intention that such a programme should 'standardize' patients, and treatment and care will need to be adapted to individual cases. Programmes are worked out jointly by doctors, nurses, technicians, administrators and social workers. It is important that all concerned should be kept fully informed. Medical care programmes were first introduced in the Scandinavian countries in 1975 and their advantages have been shown to outweigh any possible disadvantages such as loss of medical freedom. Among the conditions for which programmes have been developed in Scandinavia are the following: high blood pressure; fracture of the hip joint; diabetes; breast cancer; cancer of the bladder; and brain haemorrhage.

90. Sox, H. C. **Quality of patient care by nurse practitioners and physician's assistants: a ten-year perspective.** *Annals of Internal Medicine*, Philadelphia, Pa., 1979, Sept., vol. 91, no. 3, pp. 459-468.

A recent development in primary care in the United States is the emergence of nurse practitioners and physician's assistants, who diagnose and treat illness under supervision from a physician. This paper reviews 21 studies in which care given by nurse practitioners and physician's assistants was compared with that given by physicians. There were no significant differences between the care given by the two groups. However, the review was limited as the measure of quality of care was not very detailed and it was doubtful whether the findings could be applied to practice settings outside the hospital. The studies revealed a high level of patient satisfaction with care, but this does not necessarily reflect the way care is provided. Many of the studies were of limited usefulness because the care given was: (i) not studied in emergency rooms or nursing homes; (ii) not applied to seriously ill patients; and (iii) was not studied in situations where nurse practitioners and physician's assistants sometimes work unsupervized. However, when supervized, these two groups of staff obviously give excellent care in a defined setting.

91. Hofmann, P. B. **Assessing medical efficacy: a neglected administrative necessity.** *Hospital Progress*, St. Louis, Mo., 1979, Oct., vol. 60, no. 10, pp. 45-47.

Many factors, such as cost, benefits to patients and safety, need to be considered when deciding on the purchase of sophisticated technological equipment. These issues are particularly critical when: (i) proof of efficacy and safety is lacking; (ii) the technology is shown later to be unsafe; or (iii) alternative methods are proved more effective. The author describes three cases which illustrate the complex decisions administrators have to make when assessing medical efficacy. The first deals with the lack of a clinical trial for a drug interaction report, the second concerns a dilemma over a new cancer drug, and the third the debate over California's Natural Death Act of 1977. There is not much guidance on choice of technology in health organizations because administrators are educated to deal with daily operational problems rather than with decision making. The author believes that administrators should assume a more positive rôle in choosing the most efficient means of achieving good patient care.

92. McColl, I. **Medical audit in British hospital practice.** *British Journal of Hospital Medicine*, London, 1979, Nov., vol. 22, no. 5, pp. 485, 486, 488, 489.

Traditional and formal methods of audit are discussed. Informal procedures are within every hospital's grasp. What is not clear is the methodology for more precise systematic audit. The quality of care depends on many factors, including structure, patient risks, process and outcome. There is considerable controversy as to whether outcome or process studies are to be preferred; the advantages and disadvantages of each are summarized. If one succeeds in devising a system for measuring the quality of care, it is important to feed back the relevant information to the clinicians in an interesting and digestible form. The imposition of a rigid system of medical audit throughout the National Health Service would be inappropriate at this time, but every hospital should carefully consider what informal methods of audit should be used. Whatever system is devised the medical profession will accept it, provided it is fair, educational, and shown to benefit the patient.

93. NODOLNY, M. D. **Primary nursing care . . . as a method for improving the quality of patient care.** *Hospital Topics*, Sarasota, Fla., 1979, July/Aug., vol. 57, no. 4, pp. 10, 13-14, 17.

The primary nurse is assigned total nursing care planning responsibilities for her selected group of patients. She delivers direct nursing care each day to these patients while on her tour of duty. Associate or secondary nurses care for her patients in her absence, with a plan drawn up by the primary nurse. This paper discusses the development of primary nursing care, pointing out the deficiencies found in team nursing which led to the reappraisal of the nursing process and eventually the trend towards primary nursing care. Several early primary nursing programmes are briefly mentioned.

TERMINAL CARE

94. SCHMIDT-SOMMER, I. Sterbekliniken in Deutschland? **[Hospitals for terminal patients in Germany?]** *Deutsche Krankenpflege-Zeitschrift*, Stuttgart, 1979, Nov., vol. 32, no. 11, pp. 583-588.

In March 1979 the Catholic Academy of the Rottenburg-Stuttgart diocese held a one-day conference on hospitals for terminal patients: this was repeated, with some variations in May 1979. Four papers were read with the following titles: where do people die in Germany?; experience with the dying in German hospitals; hospitals for terminal patients as an alternative?; hospitals for terminal patients—or what do dying patients need? An open forum was also held. The majority of participants were against such special hospitals and their disadvantages were outlined as follows: patients would be isolated in 'death ghettos'; the burden on the nursing staff would be unacceptable; difficulties for doctors in determining prognosis and treatment; the high cost of such special hospitals. The open forum led to lively discussion and the general view could be summarized as 'dying patients do not need special "terminal" hospitals'.

95. WILLANS, J. H. **Selecting staff for hospice work.** *Nursing Times*, London, 1979, Dec. 6, vol. 75, no. 49, occasional papers; pp. 129, 130.

On the basis of her experience as matron of St. Christopher's Hospice, London, the author discusses the nursing staff levels required in terminal care facilities and the selection of suitable nursing staff. St. Christopher's has never had a fixed establishment. Full-time trained nurses usually join the staff to widen their experience, but seldom stay as long as a year. The contribution of part-time state registered nurses, usually married women living locally, is excellent. State enrolled nurses have always had a place in the hospice team and there are usually two to two-and-a-half in each ward, plus a part-timer in each ward for night duty. About 5/8ths of the nursing staff are nursing auxiliaries, of whom the majority are married part-timers, and the rest young, single, full-time girls gaining experience before going to nurse training school. Interviewing prospective members of staff is most time consuming, but enormously interesting and worth every minute spent. The characteristics sought are discussed. On average, two out of five interviewed join the staff.

HOME CARE, AFTER-CARE

96. BUCHANAN, A. **A study of the liaison nursing service: elderly patients discharged home from hospital in one Health Board in Scotland 1976-1978.** Glasgow, Greater Glasgow Health Board, 1979, [iv], 64pp.

Glasgow Health Board undertook an examination of the existing hospital/community liaison nursing service in respect of elderly patients discharged home from hospital. The readmission rate was found to be lower for medical patients who had contact with the liaison nurses; it was also possible to release patients from medical wards earlier when it was known that the liaison service would act as a back-up. Some recommendations are made concerning expansion of the service, staffing needs and staff training.

SPECIAL DEPARTMENTS

WARDS

See Abstract No. 55

OPERATING SUITES

See Abstract No. 99

PHARMACY

See also Abstract Nos. 14, 48, 84

97. KATZ, R. M. **Nursing education program: fundamental to successful drug distribution.** *Hospital Pharmacy*, Philadelphia, Pa., 1979, Sept., vol. 14, no. 9, pp. 520, 524, 527, 530, 532.

This paper describes a step-by-step description of an in-service education programme which helped in the conversion from a routine floor stock drug distribution system to a non-traditional unit dose system at the 700-bed Monson State Hospital, Palmer, Mass., which specializes in developmentally disabled patients. The programme is still being used as a part of the orientation programme for new nurses. The programme consists of a policy and procedural manual handout, a lecture on the mechanics of the system, a videotape module, a demonstration, practice session, return demonstration and post-test. A feature of the system is a demonstration cassette and Kardex, which enables the lecturer to demonstrate the system, the nurses to practice the system, and the nursing supervisor to evaluate performance before actual administration of medications. The use of a videotape module has added flexibility to instruction times. The success of this module has led to the use of videotaping in other pharmacy education programmes.

98. SANTAPADRE, G. and MARINI, N. Premesse ad un progetto esecutivo di gestione automatizzata del servizio farmaceutico ospedaliero. **[Setting up an automated hospital pharmacy service.]** *Ospedale*, Torino, 1979, Oct., vol. 32, no. 10, pp. 271-275.

An automated system for a hospital pharmacy is proposed. It uses an IBM 370/115 computer, an IBM 3750 computer and an IBM 2740 video-print terminal for the pharmacy, whilst a series of IBM 3221 terminals are installed in the user departments. Each product used in the hospital is listed on a file. Each department has its own drug cupboard containing enough drugs for about seven days. Whenever a drug is removed from the cupboard, the person in charge records this on a terminal, using a specific program which can only be activated when a special badge kept by the head of the department is inserted. The program's transactions are shown on the pharmacy terminal when 50 per cent of the stock in a particular cupboard has been used, and the pharmacist can then take steps to restock that cupboard. Another program facilitates the placing of orders with suppliers and yet a third provides the pharmacy with statistics on the consumption of different products. The system should be of benefit to pharmacists, doctors, nurses and administrators alike.

99. EVANS, D. M. and others. **Pharmacy practice in an operating room complex.** *American Journal of Hospital Pharmacy*, Washington, D.C., 1979, Oct., vol. 36, no. 10, pp. 1342-1347.

For hygienic reasons, staff access to operating suites must be restricted. This makes the control of stock medications difficult for pharmacy staff. To overcome this problem, the University of Alabama Hospital's department of pharmacy has established a satellite pharmacy within the operating suite complex. The pharmacy is manned by one pharmacist during the day shift with minimal technical support. The procedures followed are outlined and the standard drugs stocked for general surgery, cardiovascular surgery and emergency surgery are listed. The satellite pharmacy has improved inventory control and patient charging, assured continual access to all drugs and appropriate security for controlled substances, and expanded the pharmacy's clinical, drug information and research activities.

100. MOORE, T. D. **Administrative approach to disaster preparedness in the pharmacy.** *American Journal of Hospital Pharmacy*, Washington, D.C., 1979, Oct., vol. 36, no. 10, pp. 1337-1341.

The role of the pharmacy in disasters is usually poorly defined and few pharmacy staff have been involved in a disaster situation. It is important that senior pharmacy staff be well versed in the potential problems and pitfalls of crisis situations. To acquaint them with this information, three points are examined: (i) types of behaviour which can be expected; (ii) the effect that this behaviour can have on the pharmacy; and (iii) methods used to avoid these problems. During disasters it is important to focus on accomplishing tasks by defining staff roles, establishing chains of communication, delegating authority to competent persons, limiting decision-making by persons other than those in command, and defining the boundaries of pharmacy's involvement in the disaster. A case study of pharmacy operations during a crisis is presented, with guidelines for assessing the situation, establishing priorities, identifying resources and executing a response. Pharmacy administrators must display a high degree of

creativeness and responsibility during disasters, but training in the principles of disaster management can be helpful.

101. LIPMAN, A. G. and others. **Decentralization of pharmaceutical services without satellite pharmacies.** *American Journal of Hospital Pharmacy*, Washington, D.C., 1979, Nov., vol. 36, no. 11, pp. 1513-1519.

The disadvantages of centralized pharmacy services are outlined. Decentralization has been advocated as a solution and satellite pharmacies have been claimed to provide net savings to the hospital. This paper describes a comprehensive programme of decentralized pharmaceutical services at the 318-bed University of Utah Hospital which integrated distributive, informational and clinical services without incurring substantial renovation and construction costs. Mobile, master medication trolleys are used by pharmacy staff in patient areas to fill the unit dose trolleys used by nurses. A combination medication administration record and patient profile eliminates duplication of effort by pharmacy and nursing. The ratio of the number of drug doses administered to the number handled per patient day increased after the implementation of the scheme. This indicated that individual doses were handled fewer times by pharmacy staff.

102. SCHNEIWEISS, F. **Alternative sources of drug information.** *Drug Intelligence and Clinical Pharmacy*, Hamilton, Ill., 1979, Sept., vol. 13, no. 9, pp. 512-517.

The proliferation of medical and pharmaceutical literature has created a need for a centralized source of indexing that enables individuals to locate efficiently this literature. An excellent example of this type of system is *Index Medicus*, but it is voluminous and all-encompassing in its coverage. The need for fast, convenient access to publications in specialty areas has led to decentralized specialty indexing and abstracting systems that deal with a particular area of medicine, therapy or pharmacy practice. Thirty-one of these services are listed with their principal features.

103. TOWNSEND, T. R. and others. **Use of antimicrobial drugs in general hospitals. I. Description of population and definition of methods; II. Analysis of patterns of use.** *Journal of Infectious Diseases*, Chicago, Ill., 1979, June, vol. 139, no. 6, pp. 688-706.

These two articles are the results of a study of the use of antibiotics to combat nosocomial infections in Pennsylvania hospitals during 1974. The data shows that 28 per cent of hospital patients received antibiotics, males more often than females; seriously ill patients, identified by later mortality, had a frequency of antibiotic treatment twice that of the average patient. Elderly patients received antibiotics more than twice as often as paediatric patients; 61 per cent of all antibiotics were used on surgical patients. Fifty-seven per cent of all patients received the drugs for suspected or proven infection and 31 per cent for prophylaxis but in three per cent of cases the medical records showed no reason for the drugs to have been administered.

104. BERNICK, J. J., BROWN, D. G. and BELL, J. E. **Adventitious contamination of intravenous admixtures during sterility testing.** *American Journal of Hospital Pharmacy*, Washington, D.C., 1979, Nov., vol. 36, no. 11, pp. 1493-1496.

Approximately 600 intravenous admixtures are compounded weekly in the pharmacy of University Hospital, University of Michigan. All one-litre parenteral admixtures

prepared on three days during one week were included in this study. Samples were cultured before and after administration by direct inoculation or by culturing the membrane through which the admixture was filtered. Samples of similarly cultured large-volume parenterals served as controls. Contamination rates for control and admixture samples were not significantly different. Of 10 control and test solutions showing contamination before administration, only one test solution again showed contamination after administration but this was with a different microbe. The results suggest that adventitious contamination during sampling/culturing procedures is a component of, and possibly a dominant factor in, the contamination rates detected by in-hospital sterility tests. Combined with infection surveillance, sterility tests may be of value when infections are possibly related to admixture contamination.

LABORATORIES

See also Abstract No. 40

105. BLOMBERG, J. and others. **VIRUS—a laboratory information system for clinical virology.** *Methods of Information in Medicine*, Stuttgart, 1979, Oct., vol. 18, no. 4, pp. 207-213.

Viral diagnostic laboratories require a large administrative effort to keep track of patient cards, samples and a stream of virological data. The computerized system described is used at a virological laboratory in Göthenburg, Sweden; it handles current work and provides retrospective information. The system covers request registration, analytical orders, printing of worksheets, result reporting, result control and printing of patient reports. All work is performed on-line via VDU screens; the output can be via a line printer. The computer used is an IBM 370/158.

106. BRUN, Y. and others. **Computerized management of a medical bacteriology laboratory using real-time processing.** *Medical Informatics*, London, 1979, July/Sept., vol. 4, no. 3, pp. 165-172.

The computer system of the bacteriology laboratory at the Hôpital Cardiologique in Lyon, France, is one element in the computer management of patient data. The main objectives of the system are to reduce clerical work and to speed up the circulation of information collected from processing samples; it is also intended to widen the scope of epidemiological research. The computer can: (i) record the receipt of samples; (ii) edit worksheets and reports of examinations; and (iii) record results. Four types of worksheet are produced: (i) a daily list of samples recorded; (ii) a daily reminder of incompleted tests; (iii) a summary of a patient's bacterial tests on discharge; and (iv) monthly statistics of laboratory activities. The laboratory has three visual display units and two printers at its disposal. An assessment of the first 10 months of the system showed that the stated objectives were being met. Future use of apparatus for automatic analyses will be made easier by the present system.

BLOOD TRANSFUSION DEPARTMENT

107. BENZIGER, M., BENZIGER, J. and CANFIELD, T. M. **Blood banking in the small hospital.** *Surgical Clinics of North America*, Philadelphia, Pa., 1979, June, vol. 59, no. 3, pp. 471-482.

Before 1972, Montrose (Colo.) Memorial Hospital was predominantly oriented

towards the general practitioner. Over the next several years a rapid influx of specialists created a need for expanded and more specialized services. One of the earliest and most crucial services demanded was that for blood and blood products. This paper describes how a blood bank was developed for the hospital. It covers: space requirements; procedure manual; recruitment of donors; blood testing; and regulation and licensing of blood banks. The operation and economics of the blood bank are outlined and a case report is presented. The system is based on a fairly large list of known, pre-tested, and available donors who can be contacted quickly to supply blood upon demand. Only bare minimum stock supplies are maintained. The major problem is waste of blood, but the hospital's experience continues to fall below the average for rural areas.

108. HEMPHILL, B. **Replacement fee no problem: continues in clearinghouse.** *Lab World*, Philadelphia, Pa., 1979, Oct., vol. 30, no. 10, pp. 28, 30, 32, 36.

Despite the withdrawal of the American National Red Cross from the American Association of Blood Banks' (AABB) National Clearinghouse Programme, the activities of the Clearinghouse have expanded. This provides evidence of the effectiveness of the replacement deposit fee as a donor motivation, the desire of people to give blood for the personal benefit of relatives and friends, and the public's acceptance of the Clearinghouse concept. The problems arising from the Red Cross withdrawal and the steps taken to overcome them are discussed. In the interest of promoting better resource-sharing, the Clearinghouse has developed two new services: AABB Blood Replacement Exchange and AABB Blood Co-operative. The former operates much like the former Clearinghouse, providing for the exchange of blood replacement credits and blood based on a credit-debit accounting system. The Blood Co-operative was designed to accommodate these blood banks and transfusion services operating on the concept of community responsibility which do not use a replacement deposit fee and do not wish to engage in blood credit transfers. The only cost for participating in the expanded Clearinghouse is the 35 cents fee charged to help defray AABB expenses in maintaining services.

DIAGNOSTIC X-RAY DEPARTMENT

109. ARENSON, R. L. and LONDON, J. W. **Comprehensive analysis of a radiology operations management computer system.** *Radiology*, Easton, Pa., 1979, Nov., vol. 133, no. 2, pp. 355-362.

A computer system for Radiology Operations Management (ROM) at the Hospital of the University of Pennsylvania is discussed. The scheduling and file room modules are based on the system at Massachusetts General Hospital. The patient tracking module shows patient delays while the reporting module allows: (i) cathode ray tube keyboard entry by operators; (ii) entry of standard reports by radiologists using bar code labels; and (iii) entry by radiologists using a specially designed diagnostic reporting terminal. Time-flow studies were performed before implementation of the system and demonstrate a significant improvement in scheduling, patient waiting time, retrieval of X-rays and report delivery. The cost-effectiveness of this system can be demonstrated by the recovery of previously lost records.

110. O'Beirne, M. **An X-ray chair for non-ambulant patients.** *Radiography*, London, 1979, Nov., vol. 45, no. 539, pp. 253-255.

A chair suitable for taking X-rays of non-ambulant patients has been developed by modifying a commode chair. The main features are: (i) the seat is about the same height as a bed; (ii) it has four smallish wheels which move readily in all directions, but can be fixed for ease of travel and locked by one footbrake; (iii) both arm-rests can be lifted easily, and swing out of the way; (iv) the metal part of the back rest can be removed leaving a non-opaque canvas band for back support; (v) a simply-inserted overhead bar for supporting the arms when taking a lateral chest radiograph; (vi) waist-type seat belt; (vii) movable foot-rest which will take the weight of a heavy, standing patient without tipping the chair; (viii) fitted leg supports; and (ix) drainage bottle holders. Observations of the chair in use for 18 months showed: (i) X-ray examinations of non-ambulant patients were easier for patients and radiographers and quicker; (ii) the number of stretcher cases from the wards was reduced considerably; and (iii) many casualty patients were sent from that department and X-rayed in the chair without being moved at all. The chair is now used for all patients who require radiographs to be taken while they sit in the erect position. Five photographs of the chair in use are included.

111. Abshoff, J. Die Versorgung mit Computer-Tomographen im stationären Bereich am Beispiel Nordrhein-Westfalens. **[Computer tomography for in-patients: the North Rhine/Westphalia example.]** *Krankenhaus*, Stuttgart, 1979, Oct., vol. 71, no. 10, pp. 369-375.

The provision of computer tomography in West Germany is discussed with particular reference to such equipment in the *Land* of North Rhine/Westphalia. Computer tomography must be regarded as an important component of medical care but it should be limited to suitable hospitals and is not suited to medical practices. It requires high technical competence and is expensive and should thus be installed only where it is likely to be fully used.

RADIOTHERAPY DEPARTMENT

112. Ito, S. and Irie, G. **A patient information system for radiotherapy.** *Strahlentherapie*, Munich, 1979, June, vol. 155, no. 6, pp. 369-375.

In April 1972 the Department of Radiology, School of Medicine, Hokkaido University, Japan, installed a computer-aided patient information system for radiotherapy. Clinicians did not, however, find it acceptable and since then it has been developed according to their needs and capabilities. This paper describes the present system, which at the end of 1977 held data on about 4,500 patients. The system is based on a large scale computer, FACOM 230-60, in the university computer centre and a mini-computer, TOSBAC 40-C(T-40), in the department of radiology. Programs have been written in FORTRAN. Operation of the system for six years has shown that three kinds of useful figures are obtained: (i) a 'personal histogram' which shows the patient's progress in a line of letters, each letter corresponding to the status at each month after treatment; (ii) survival curves calculated by direct method from the histograms; and (iii) survival curves calculated by actuarial method, and theoretically calculated survival curves assuming a distribution of cancer deaths after treatment.

Other conclusions are: (i) long-rank tests between two groups of patients are useful to compare different treatment techniques; (ii) lists of patients by chart number and name are useful for administrative purposes; and (iii) lists of patients on whom there has been no information for six months are useful for making contact.

RADIOISOTOPE DEPARTMENT

113. CROFT, D. **Nuclear medicine in district general hospitals.** *British Medical Journal*, London, 1979, Nov. 24, vol. ii, pp. 1336-1338.

Nuclear medicine is a recognized clinical specialty both nationally and internationally. In Great Britain, teaching and regional centres are now generally satisfactorily served in terms of nuclear medicine departments, but there is increasing pressure from clinicians for radioisotope techniques to be provided in district general hospitals. To create clinical radioisotope services at district level, physicians or radiologists with experience in nuclear medicine need to be trained and appointed. Such appointments would allow facilities to evolve that would provide either a comprehensive nuclear medicine service formed around a physician or an imaging service based on a radiologist. Tables show the staff and equipment needed to provide these two levels of service to a district of 200,000 to 300,000 people, and their capital and recurring costs. Such units would improve the care of patients at a reasonable recurring cost of £15 to £30 per investigation.

REHABILITATION

114. ISAACS, B. **Thoughts from a bathchair.** *Physiotherapy*, London, 1979, Nov. 10, vol. 65, no. 11, pp. 338-340.

The author reviews the achievements of physiotherapists in the promotion of activity in old age and looks forward to future advances. About 20 years ago physiotherapists were introduced in geriatric departments offering rehabilitation for the elderly in co-operation with occupational therapists, speech therapists and patients' relatives. With increased understanding of the extent of stroke disability the physiotherapist was able to adjust treatment to meet individual needs. However, there is now a demand for an evaluation of rehabilitation therapy by means of various trials. The author doubts whether these would achieve anything because: (i) there are many variables among patient groups requiring stroke rehabilitation; (ii) treatment methods cannot be separated from the person giving it; and (iii) recovery cannot be easily quantified. Physiotherapists need opportunities for research alongside doctors, physiologists and bio-engineers. The reasons for loss of balance in old age are being studied at the University of Birmingham's Department of Geriatric Medicine. A few possible causes are discussed here, but much more research needs to be done on the cause and prevention of balance deterioration.

115. **Accident and emergency services: rehabilitation.** *British Medical Journal*, London, 1979, Nov. 17, vol. ii, pp. 1267-1269.

Physiotherapy and rehabilitation are essential parts of an accident service though they are not usually based on the accident and emergency department. Accidents account for the largest number of patients needing rehabilitation. The work of an

industrial rehabilitation unit is outlined. Also discussed are: consultation and co-operation with community services; physiotherapy; and rehabilitation for sports injuries.

PHYSIOTHERAPY DEPARTMENT

See also Abstract No. 79

116. SHAW, A. **Safety aspects of physiotherapy equipment.** *British Journal of Clinical Equipment*, London, 1979, Nov., vol. 4, no. 6, pp. 231, 232, 234, 235.

The type of equipment used makes the physiotherapy department especially vulnerable to hazards, but no coherent attempt has been made to consider the range of safety problems arising from this specialty. The apparatus often consumes considerable quantities of electrical power; its mobility adds to the hazards, as does the limited access to scientific and engineering help. From personal experience and a number of incidents reported the author discusses some of the changes and possible lessons for the future under the headings: equipment design; operational problems; and calibration and maintenance.

DEPARTMENTS FOR SPECIAL THERAPY

See also Abstract No. 138

117. LINN, B. S. and others. **Do dollars spent relate to outcomes in burn care?** *Medical Care*, Philadelphia, Pa., 1979, Aug., vol. 17, no. 8, pp. 835-843.

A total of 1,656 burns admissions to 73 Florida hospitals were studied over one year from two sets of data: (i) a set describing the hospitals; and (ii) a set describing the patients' burns, treatment and outcome. The study showed that the length of stay, the number of bills unpaid, and the proportion of bills unpaid to the total number of bills were two to six times greater among burns admissions than among other admissions. Three hospitals had special burns facilities, but even allowing for severity of injury, these hospitals had poorer outcomes and higher costs than ones without special units. When only those patients with greater than 30 per cent burns were compared between hospitals, those with special units still had poorer outcomes. There was no evidence that mortality and complications were lower in special facilities, but the answer can only come from a prospective study of outcome with comparable patients randomly assigned to burns units or open wards. If the survey results were confirmed, the cost-effectiveness of burns units might be called into question.

INTENSIVE CARE UNITS

See also Abstract Nos. 77, 128, 135

118. UNITED STATES. NATIONAL HEALTH PLANNING INFORMATION CENTRE. **Planning for general medical and surgical intensive care units: a technical assistance document for planning agencies.** (DHEW Publication No. (HRA) 79-14020; Health Planning Methods and Technology Series No. 11) Hyattsville, Md., National Health Planning Information Centre, 1979, vii, 82pp.

This study reviews planning methods and criteria for intensive care units. The

number and type of intensive care beds required by an area's population must be determined. Further steps involve: (i) classifying hospitals according to the types of patients they can treat; (ii) assuring that all the residents are within reasonable travelling time of basic life support services; (iii) establishing a formal system for referring and transporting patients in need of specialized care; and (iv) developing a communications and ambulance system. To minimize costs the planning must be done at least at regional level, though some decisions on staffing and equipment can be made locally. Examples are given of the systems operating in several areas of the United States and a bibliography is included.

119. SHENKIN, A. **Monitoring the nutritional status of critically ill patients.** *Intensive Care Medicine*, Heidelberg, 1979, Nov., vol. 5, no. 4, pp. 165-170.

The development of systems of nutritional support using the external or parenteral route has made it possible to meet the nutritional requirements of virtually all patients. However, definition of what is 'adequate' is often very difficult. In order to plan a nutritional regimen on a rational basis it is necessary to have a quantitative estimate of the requirements for each of the main types of nutrients. The available tests of energy, protein, mineral and vitamin status are reviewed and a protocol for nutritional monitoring is proposed. If such a protocol is followed, the patient is more likely to obtain an optimal clinical response to his nutritional therapy and potentially serious metabolic disorders may be detected early and treated before they become clinically significant.

120. ACCORSI, A. and others. Inquinamento in rianimazione. **[Infection control in intensive care.]** *Ospedale*, Torino, 1979, Oct., vol. 32, no. 10, pp. 283-289.

A bacteriological air pollution detector was used in the new resuscitation and intensive care department in St. Ursula's Hospital in Bologna to monitor air contamination, first before it was opened and then 15 days later. On the second occasion the level of pollution was far from satisfactory, and the cleaning programme was therefore stepped up and rationalized. In addition to the normal daily cleaning, all the surfaces (walls, floors, ceilings) were washed with an aqueous solution of 0.5 per cent Savlon as often as five times a month for the filters; four times a month for corridors, treatment rooms, and laboratory; and twice a month for the kitchen. In addition, the air was sterilized with Panapest, using an atomized electric sprayer. Analysis of later results obtained with the detector showed that it was the regular, scrupulous cleaning of surfaces which was the main factor in reducing the level of contamination.

121. SHIELD, M. J., HAMMILL, H. J. and NEALE, D. A. **Systematic bacteriological monitoring of intensive care unit patients: the results of a 12 month study.** *Intensive Care Medicine*, Heidelberg, 1979, Nov., vol. 5, no. 4, pp. 171-181.

Bacteriological specimens were obtained from 464 patients who were admitted to the intensive care unit of the Middlesex Hospital in a one-year period. Urine and sputum specimens were sent to the laboratory daily and other specimens as considered necessary. The specimens analyzed included urine, sputa, tracheostomy swabs, central venous pressure line catheter tips, blood cultures, wound drainage fluid, cerebro-spinal fluid, pleural fluid and peritoneal dialysate samples. The results are presented in 16 tables and discussed. The study has shown that, by careful bacteriological monitoring

taken in conjunction with the clinical findings, it is possible to distinguish between colonization and infection in most instances and that by keeping a daily bacteriological record it is also possible to identify developing colonization or infection at an earlier stage than is normally achieved. The survey also permitted sufficient information to be gathered to identify certain factors associated with increased risk of infection; excessive prophylactic use of ampicillin and, to a lesser extent, gentamicin, and contaminated ventilatory equipment were notable among these. Also demonstrated was the importance of infection peculiar to the compromized host such as that caused by *Branhamella catarrhalis*.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

122. COOPER, N. A. and LYNCH, M. A. **Lost to follow up: a study of non-attendance at a general paediatric out-patient clinic.** *Archives of Disease in Childhood*, London, 1979, Oct., vol. 54, no. 10, pp. 765-769.

During a three-month period (May to June) 600 appointments were made for children at Guy's Hospital general paediatric out-patient clinics. The overall non-attendance rate was 25 per cent; about one-third of these were persistent non-attenders. A group of 50 non-attenders was compared with a group of 50 regular attenders. Information about the children obtained from hospital records and social work notes, included: sex, age, length of follow-up, social class, ethnic group, housing, family structure, method of referral; initial referral diagnosis, subsequently identifiable problems, hospital admissions, casualty attendance, growth, and neonatal concern. Several factors were more often found in the group of non-attenders: (i) initial referral via casualty without a letter from the family doctor; (ii) hospital admission before the first out-patient attendance; (iii) recognition of multiple medical problems; and (iv) evidence of diffuse social problems affecting the family. Thirty-four of the non-attenders had at least two of these factors, compared with only nine children in the other group. Many of these problems can be identified at the initial consultation, and perhaps other methods of continuing health should be provided for these children.

123. FRIES, B. E. and GINSBERG, A. S. **The effect of delay rules in controlling unscheduled visits to hospitals.** *Medical Care*, Philadelphia, Pa., 1979, Sept., vol. 17, no. 9, pp. 967-972.

The increased demand of unscheduled visits to hospital out-patient departments, and particularly to walk-in clinics, necessitates consideration of means of controlling this flow and reducing in-hospital waiting times. A simple model is developed which assumes that a percentage of the unscheduled visits are made by patients with non-urgent conditions, who may be asked to delay their arrivals for specified lengths of time. A simple rule for determining the length of this delay was examined by computer simulation. The results of the simulation demonstrated that the delay rule provided a marked decrease in the average waiting time in the queue (and therefore in the length of the queue), at the expense of a small increase in the total time span from the patient's initial contact until seen by a practitioner.

CASUALTY AND ACCIDENT

See also Abstract Nos. 13, 88, 123

124. BARRY, W. S. and others. **Expanding psychiatric service in a hospital emergency room.** *Journal of the American Medical Association*, Chicago, Ill., 1979, Sept. 28, vol. 242, no. 13, pp. 1394-1395.

Senior medical residents were used to extend psychiatric coverage in the busy emergency department of Baltimore City Hospital. Their service was supported by staff psychiatrists who could be called upon if necessary. The medical residents worked in conjunction with psychiatric residents to provide a 24-hour emergency service to 350 patients during one year. Admission was discouraged but, if required, was reviewed by the staff psychiatrist on call. There were no significant differences in the disposition of individual patients seen by medical or psychiatric residents, indicating that a similar primary service was provided by both groups of physicians. The medical residents benefited from a more varied experience of patient care, at the same time earning a supplement to their salaries at no great cost to the hospital.

125. **Accident and emergency services: the staffing of departments.** *British Medical Journal*, London, 1979, Nov. 3, vol. ii, pp. 1119-1121.

Accident and emergency departments that are comfortably staffed, 24 hours a day and seven days a week, still seem to be in a minority. Yet without an adequate complement of staff mistakes may be made when doctors are exhausted from excessive working hours or have too many claims on their attention. Following visits to a number of hospitals, the author discusses the medical staff complement, teaching and research, and the role of the specialties of anaesthesia, radiology and psychiatry. Also discussed are the roles and staffing levels of nurses, clerical and administrative staff, and social workers. The importance of communication in the department is stressed, particularly personal communication between different types of staff and between all categories of staff and the patients.

CHILDREN

See also Abstract Nos. 28, 35, 122

126. STOCKPORT COMMUNITY HEALTH COUNCIL and NATIONAL ASSOCIATION FOR THE WELFARE OF CHILDREN IN HOSPITAL (STOCKPORT BRANCH). **Joint working group report on play for children in hospital.** (Chairman: M. A. Postle). Stockport, Stockport CHC, 1979, 11pp.

In well children play is essential to their health and happiness, and it is even more essential in hospital where they are cut off from home and familiar surroundings. The circular from the Department of Health and Social Security on this subject (HC(76)5) is criticized for failing to endorse the use of trained play staff. Apart from play staff, it is useful if medical and nursing staff play with their patients, relaxing the child and familiarizing him with the staff, making him more confident and co-operative. A number of further recommendations are made, most of them not specific to the Stockport situation.

127. BEUF, A. H. **Biting off the bracelet: a study of children in hospitals.** Philadelphia, Pa., University of Pennsylvania Press, 1979, ix, 164pp. £7.50. (ISBN 0 8122 7766 x)

Modern hospitals are criticized for their institutionalization of patients producing depersonalization and a loss of independence which contrast with their own image of caring and healing. Consequently, children in particular often become frightened, confused and depressed by the system. Long-stay children can suffer a loss of their sense of identity and self-determination, which can result in permanent damage to their developing personalities. Solutions to these problems are presented by suggested changes in medical training and hospital routine that would allow for greater individual autonomy for both children and adults. Ways are suggested in which parents can prepare their children for the hospital experience.

128. MINTZ, L. and others. **Nosocomial respiratory syncytial virus infections in an intensive care nursery: rapid diagnosis by direct immunofluorescence.** *Pediatrics*, Evanston, Ill., 1979, Aug., vol. 64, no. 2, pp. 149-153.

A four-week outbreak of respiratory syncytial virus in the Mount Zion Hospital and Medical Center, San Francisco, involved eight out of 17 infants in an intensive care nursery and one in a nearby newborn nursery. Nasopharyngeal swab specimens were obtained at two to four day intervals from all the infants and each staff member involved. To obtain quick results, immunofluorescent staining was used and specimens were positive in six out of seven virologically confirmed cases, the eighth case being detected by staining alone. Of 15 staff members who complained of upper respiratory illness, the staining technique produced a positive result in six. Controlled measures included: (i) regular fluorescent antibody screening; (ii) isolation of positive patients; and (iii) assigning certain staff members, including those infected, if well enough, to care for infants already infected. The use of the fluorescent antibody technique leads to early detection of respiratory syncytial virus and this early diagnosis, combined with control measures, limits the spread of serious illness.

GERIATRICS AND LONG-STAY

See also Abstract Nos. 75, 96, 114, 144

129. BALDONI, E. Un dipartimento per il paziente anziano. **[The geriatric department.]** *Ospedali d'Italia*, Roma, 1979, May, vol. 16, no. 5, pp. 24-39.

The author examines the problems of old age, and chronic disease, and various aspects of geriatric medicine. Modern medicine can save the patient from death but cannot necessarily rehabilitate him completely either physically or socially. One answer to this problem is the establishment of a geriatric department in the general hospital: this can provide graduated care for elderly patients with both chronic and acute conditions. Patients with chronic disease can be admitted for diagnosis, treatment, or rehabilitation, or for social reasons. The geriatric department will have all the necessary staff for occupational therapy, psychotherapy, and rehabilitation, and arrangements can be made for patients with chronic conditions to receive further

care after their discharge, either at home or in the day hospital. The author believes that community involvement should be encouraged, and that with proper care many elderly persons can be restored to complete or partial independence.

130. SCHOUTEN, J. **Modern ideas about organization of services for elderly patients in hospitals and nursing homes in the Netherlands.** *Journal of the American Geriatrics Society*, New York, 1979, June, vol. 27, no. 6, pp. 258-262.

Nursing homes in the Netherlands are hospitals for elderly patients needing continuing care and are regulated by the Exceptional Medical Expenses Act (1968). Physically handicapped and psychogeriatric patients are cared for in the same home. In Amsterdam, elderly patients are assessed in the 110-bedded geriatric department of the Municipal Hospital and are then transferred to a nursing home if long-term care is needed. A doctor or nurse from the department visits patients at home, and in the nursing homes to strengthen the contact between the nursing homes and the hospital. During 1977, the hospital's somato-geriatric department assessed 694 patients, 45 per cent of whom went home and 21 per cent to a nursing home. In the psychogeriatric department 143 patients were assessed, but because senile dementia was the main diagnosis, only 32.6 per cent were able to go home. The most common diagnoses in the somato-geriatric department were heart failure, cardiac arrhythmias, bronchitis and renal infection.

CANCER

131. CASSILETH, B. R., editor. **The cancer patient: social and medical aspects of care.** Philadelphia, Pa., Lea and Febiger, 1979, xii, 332pp. £8.00. (ISBN 0 8121 0672 5)

This book collects a number of papers together from professionals in the fields of clinical oncology, psychiatry, epidemiology, health care economics, law, rehabilitation, sociology, nutrition, pastoral care, social work and nursing. The contributions are divided into the following sections: (i) social and cultural dimensions; (ii) management issues (detection and control); and (iii) the human dimension. Most of the contributors are from the University of Pennsylvania and their papers are all based on American experience. Lists of references are given after each paper.

132. VOLTERRANI, F. and others. A **computerized cancer patient information system.** *Tumori*, Milan, 1979, Nov., vol. 65, no. 3, pp. 381-388.

This paper describes an original computerized patient information system for cancer patients. The system has been designed mainly to compile and store essential data on cancer natural history, complications of various treatments, and end results in such an easy and general way that this data can immediately be used for analysis and study. It accepts data from punched cards or magnetic tapes, and the number of patient records is limited only by the storage capacity of the computer. The cost of initiating and maintaining the system is low, since specialized manpower is not necessary. In fact, collection of medical data may be performed by the medical staff and input cards filled in by a typist. The computer time required for the sample run is one minute on the UNIVAC 1106 computer, costing only a few dollars.

NEUROLOGY AND NEUROSURGERY

See also Abstract No. 23

133. DUGGINS, E. L. and TERRILL, L. A. **The neurosurgical nursing unit: structure, staffing, and recruitment.** *Journal of Neurosurgical Nursing*, Chicago, Ill., 1979, March, vol. 11, no. 1, pp. 37-40.

A distinction is drawn between the 'medical' and 'care' functions of the hospital, and the situation of the nursing unit within the organization of the hospital is considered. The nursing unit becomes a centre of processing and distribution with little consideration of the nature and technical aspects of tasks to be performed. However, the advent of highly specialized equipment has resulted in the development of the specialized nursing care unit, which is relatively isolated from the traditional care units. The neurosurgical service at the 1,125 bed Wilmington (Del.) Medical Center has two 24-bed units. This paper describes how it: (i) determined nursing staff requirements by using five levels of care—minimal, general, special, subsensitive and intensive; and (ii) recruited suitable staff.

CARDIOLOGY

134. HILL, J. D., HAMPTON, J. R. and MITCHELL, J. R. A. **Home or hospital for myocardial infarction—who cares?** *American Heart Journal*, St. Louis, Mo., 1979, Nov., vol. 98, no. 5, pp. 545-547.

In a study in Nottingham, England, a hospital-based team consisting of a junior doctor and a coronary care unit nurse was sent to patients' homes in response to calls from general practitioners about patients with suspected myocardial infarction. The team made an additional working diagnosis, provided emergency treatment, excluded unsuitable patients on predetermined grounds, and observed the remainder of the patients in the home for a total of two hours. They then randomly allocated them to home or hospital management. Evidence for the diagnosis of myocardial infarction was collected according to a set plan in both groups and mortality was assessed at six weeks. From 500 calls in four years, 349 patients were suspected of having myocardial infarction. Of these, 85 were excluded on medical or social grounds, the remainder being randomized. There was no significant difference in outcome between the two random groups, while the mortality rate of the excluded group was considerably higher than that of the combined random group. It is concluded that the provision of hospital-based coronary care facilities will not influence community mortality rate in patients who develop chest pains and who follow the normal pattern of delaying their call for help.

135. UNITED STATES. NATIONAL HEALTH PLANNING INFORMATION CENTRE. **Planning for coronary care units: a technical assistance document for planning agencies.** (DHEW Publication No. (HRA) 79-14019; Health Planning Methods and Technology Series No. 10) Hyattsville, Md., National Health Planning Information Centre, 1979, viii, 99pp.

The high cost of coronary care units (CCUs) mean that particularly careful planning is required in this area. The initial chapters deal with the following topics: regional planning; methods for estimating the number of beds needed in an area or hospital;

optimal size of CCU; location, transport and communications; and organization and management of the CCU. There are separate chapters on staffing requirements, facilities and equipment, and hospital costs associated with CCU services.

136. FINKLER, S. A. **Cost-effectiveness of regionalization: the heart surgery example.** *Inquiry*, Chicago, Ill., 1979, vol. 16, no. 3, pp. 264-270.

A new methodology of hospital cost-finding, called component enumeration (CE), has been developed and applied to open-heart surgery. This methodology which is described, accumulates all of the costs of a hospital programme that would not be incurred if the programme were not offered and is therefore particularly suitable for use in deciding whether to rationalize a service. The CE method was applied to open-heart surgery at one hospital; from this a graph was prepared showing the average cost of open-heart surgery in relation to the number of operations per year. This indicates that, in general, the cost per open-heart surgery patient can be expected to fall steeply at first as quantity increases. The curve then becomes flatter as the fixed costs become a minor part of total costs and the variable costs, which are the same per patient at any volume, become dominant. Application of the curve to all hospitals in California doing open-heart surgery suggests that regionalization would result in considerable savings even after travel and inconvenience costs have been taken into consideration.

137. MACFARLANE, P. W. **A critical appraisal of computer assisted ECG interpretation.** *Journal of Medical Engineering and Technology*, London, 1979, Nov., vol. 3, no. 6, pp. 281-287.

The development and current situation of techniques for computer assisted reporting of electrocardiograms (CARE) are described. Current research is reviewed, with particular reference to hardware, software, 24-hour electrocardiography, paediatric electrocardiography, surface mapping and exercise electrocardiography. Criticisms of CARE include: doubts about accuracy; all computer reports require to be reviewed before distribution; problems with the analysis of cardiac arrythms; the rigidity of the computer output; difficulty in integration of day to day variation in serial ECGs; and the bulkiness of the equipment. Advantages of CARE are: (i) the management facilities which it offers; (ii) quality control of recordings; (iii) the turn around time for interpretation can be greatly reduced; (iv) the experience of the program designers in the central teaching hospital can be made available to less experienced reviewers in the periphery; (v) observer bias is minimized; and (vi) the computer facilitates the handling of large numbers of ECG interpretations. Improvements in the physician's own diagnostic ability and the cost-effectiveness of the system have not been determined. In the author's view, the future of CARE is already well assured.

UROLOGY

138. DAVIES, R. **A study of a renal unit.** *Journal of the Operational Research Society*, Oxford, 1979, Oct., vol. 30, no. 10, pp. 873-884.

A simulation model for predicting the future use of resources was developed in the Renal Unit at the Churchill Hospital, Oxford, where a combined dialysis/transplant

programme has been operating since 1975. The model differs from its predecessors in matching patients with the kidneys available. The parameters of the model were estimated by collecting information on every patient who was tested in the unit between its opening in 1967 and November 1976. The admission rate was 2.23 patients per month and the average rate of transplants (since 1975) was four per month, with a long waiting list. Estimates were made of (i) the proportion of patients who would be added to the waiting list; and (ii) the average length of waiting time for a transplant. The model predicted that the large number of dialysis patients would fall and that, in due course, the number of patients waiting for a transplant would stabilize. The number of permanent dialysis patients and the number with successfully transplanted kidneys would continue to increase. The capacity of the unit appeared to be adequate for the immediate future. The model can also be used to predict the future regional costs of combined dialysis and transplant services.

139. CLARK, R. and others. Le contrôle des infections: un travail d'équipe efficace. **[Infection control: a successful team approach.]** *Infirmière Canadienne*, Ottawa, 1979, Nov., vol. 21, no. 10, pp. 23-26.

In a general hospital in Saint John's, New Brunswick, approximately 90 per cent of the patients receiving level III care in the 140-bed geriatric and long-stay unit had a permanent vesicular catheter. The incidence of urinary tract infection in these patients was unacceptably high, and a combined effort was made to reduce it. The measures which were taken included increasing the patients' fluid intake in order to prevent dehydration, the use of silicone catheters instead of latex ones, a closed-circuit drainage system with intermittent instead of regular irrigation of the bladder, up-dated methods of catheterization, improvements in general care, rapid detection and treatment of bacteraemia, and regular urine cultures. In addition, each patient was given prophylactic injections of gentamicin whenever his catheter was changed. Any patient who continued to have urological problems once the silicone catheter and closed-circuit system were in position was referred back to the urologist for evaluation. Efforts were also made to reduce the number of patients requiring a permanent catheter. Within a year the incidence of urinary infection in these patients had fallen from 19 per cent to less than three per cent.

MATERNITY

See also Abstract No. 142

140. WARFORD, H. S., JENNETT, R. J. and GALL, D. A. **A computerized perinatal data system.** *Medical Informatics*, London, 1979, July/Sept., vol. 4, no. 3, pp. 133-138.

The development and planned implementation of a computerized perinatal data system at St. Joseph's Hospital and Medical Center in Phoenix, Arizona, is described. The system consists of three major parts: (i) the central data system; (ii) the foetal surveillance system, and (iii) the newborn surveillance system. The retrieval system provides data sheets for individual patients and periodic statistical summaries. The foetal surveillance system will be used in conjunction with a number of commonly used foetal monitors and data may be recalled for use in teaching and research. The

newborn surveillance system is an extension of the foetal system, but the data to be gathered will be greater than that collected during labour and delivery. A fourth system, Remote Access Data Entry Modules, provides a means of entering certain data into the main systems while care is being administered. The system as a whole provides valuable assistance to perinatal assessment from the first pre-natal examination to the discharge of mother and infant. The central data system is heavily used by other hospitals by means of telephone links.

141. JONES, P. K., HALLIDAY, H. L. and JONES, S. L. **Prediction of neonatal death or need for interhospital transfer by prenatal risk characteristics of mother.** *Medical Care*, Philadelphia, Pa., 1979, Aug., vol. 17, no. 8, pp. 796-806.

Data for this study were collected by means of a television link between the newborn nursery of a small community hospital in a non-white, poor inner city area and a large hospital specializing in neonatal care. Data were gathered relating pre-natal risks to the well-being of the neonate. These risks, arranged according to a numbered scale, included age and parity, previous obstetric history, social and economic background, present obstetric complications and other health problems. The risks were correlated with neonatal deaths, transfer to the large hospital for delivery, specific maternal complications and the need for therapeutic intervention in the neonate. A major finding was that social and behavioural factors are significant predictors in neonatal morbidity and need for transfer. Screening for assessment of risk should be carried out during the pre-natal period so that a recommendation for a suitable place of delivery can be made.

GYNAECOLOGY

142. Gynécologie-obstétrique. **[Gynaecology and obstetrics.]** *Hôpital à Paris*, Paris, 1979, July/Aug., no. 52, pp. 282-313.

A report on current activity in gynaecology and obstetrics (GO) in Assistance Publique (AP) hospitals is followed by: an analysis of general epidemiology in this field; changes in the distribution of care; demographic trends in the Ile de France; facilities in the private sector; and an examination of what the AP's long-term objectives should be. The birth rate is still falling but AP maternity hospitals and units are attracting a larger proportion of GO patients than in the past, partly because the facilities which they now provide are much better than they used to be. The AP therefore aims to increase the number of GO beds by about 15 per cent within 10 years, in the hope of attracting a larger share of all GO patients, despite the fact that the region will then require fewer GO beds than at present. The functions and facilities which a maternity unit or hospital should supply are examined in some detail and the AP's development plans for each of the four sectors of the region are described. A survey of current facilities for the voluntary termination of pregnancy indicates that these are adequate technically, but in order to encourage more women to use public sector facilities, every GO unit in the AP should have an abortion and family planning centre. The report includes 17 tables of statistics.

OPHTHALMOLOGY

143. EDWARDS, K. H. **A review of the work of the London Refraction Hospital.** *Ophthalmic Optician*, London, 1979, Oct. 27, vol. 19, no. 21, pp. 781, 782, 784.

The London Refraction Hospital, founded in 1922, is staffed, maintained and, to a large extent, financed by ophthalmic opticians. Its aims are to provide expert advice and treatment for patients, to provide clinical training for undergraduate, pre-registration and qualified ophthalmic opticians, and to carry out research. At present the hospital has 19 refraction clinics (four especially for children), eight orthoptic clinics and 10 contact lens clinics. In addition there are several specialist clinics and a pathology clinic run by a medical consultant. The clinic has 136 voluntary staff (36 of them pre-registration students) to complement the three senior lecturers and a clinical assistant secretary. In 1978 some 13,000 patients attended the hospital.

DENTISTRY

144. GELBIER, S. and HOPES, I. **The dental needs of day-patients and in-patients at a London hospital.** *Public Health*, London, 1979, Nov., vol. 93, no. 6, pp. 350-357.

A clinical assessment of the dental state of 123 patients attending a geriatric unit at a London hospital is described. Thirty-nine were day patients and 84 were in-patients. The information gained, particularly about the state and efficiency of dentures, was used to determine what treatment was desirable for each patient. A questionnaire was also used to find out about patients' own knowledge of their dental health, but was not found to be very useful. Sixty-two patients wore both full upper and lower dentures, 39 of which were ill-fitting and 30 of which had not been properly cleaned. Nine patients needed extractions, four needed periodontal treatment and 63 prosthetics. The clinical approach was found to be the only reliable method of determining treatment needs. Over 50 per cent of the patients needed some form of treatment, which would not have been available to them unless provided at the hospital. Much of the help needed related to dentures and their cleanliness.

PSYCHIATRY

See also Abstract Nos. 35, 124

145. GANDY, R. J. **An enquiry into the mental health enquiry.** *British Journal of Psychiatry*, London, 1979, Dec., vol. 135, pp. 531-534.

Statistics on psychiatric services are regularly distributed to regional and area health authorities from the Mental Health Enquiry (MHE), a computerized information system covering both mental illness and mental handicap. A limited study into the accuracy of information for the MHE was undertaken at two major mental illness hospitals in Leicestershire. The case notes of the first 50 admissions to each hospital in 1978 were obtained and the MHE input documents were extracted. The case notes from each hospital, without their originals, were then sent to the other hospital, where a new MHE document was completed from the information in the case notes. The analysis

of the study was a simple matching of the information on the original and on the copy. The results indicate that certain items of data are of questionable value. The current arrangements for processing the data may also need review. Several points raised by the study have been put to the Department of Health and Social Security.

146. BIEGLER, G. Funktionen und Aufgaben des Schwesternteams auf einer psychosomatischen Station. **[The functions and duties of the nursing team on a psychosomatic ward.]** *Deutsche Krankenpflege-Zeitschrift*, Stuttgart, 1979, Nov., vol. 32, no. 11, pp. 595-597.

The psychosomatic ward at the Hanover teaching hospital was set up in 1977 and has at present 14 beds. Patients are in two groups of six to eight each. The work of the ward divides into four sections: the duties of the nurses (each patient is assigned to a particular nurse); directing the 'initiative groups' (occupational therapy, the literature group, the painting group, relaxing exercises, group discussions, and physical training); co-operative work in the analytical group; individual psychotherapeutic interviewing; and forming the ward environment. The team consists of seven qualified nurses (with a two-year post basis training and regular refresher courses) and two to three therapists.

147. DEPARTMENT OF HEALTH AND SOCIAL SECURITY. **In-patient statistics from the mental health enquiry for England 1976.** (Statistical and Research Report Series No. 22) London, HMSO, 1979, [iii], 127pp. (ISBN 0 11 320296 2)

The in-patient statistics collected in the Mental Health Enquiry have been published since 1964. As usual the 1976 statistics cover three categories: (i) admissions; (ii) discharges and deaths; and (iii) resident patients. The number of admissions to psychiatric hospitals and units increased by over two per cent to reach a record level, partly as a result of a large number of readmissions of people over 65. First admissions for alcoholic psychosis rose by 10 per cent, most of the rise due to an increase in female patients. First admissions for drug dependence fell by 14 per cent to the lowest level since 1970. Overall the switch from in-patients to out-patients and day patients continued.

148. RIEDL, A., KATSCHNIG, H. and MARKSTEINER, A. Die Kosten- und Finanzierungsstruktur der stationären psychiatrischen Versorgung in Österreich: ein Hindernis für die Psychiatriereform? **[The costs and financial structure of psychiatric in-patient care in Austria: an obstacle to reform?]** *Österreichische Krankenhaus-Zeitung*, Wien, 1979, Sept., vol. 20, no. 9, pp. 423, 424, 426-428, 430-432, 434, 435.

It is generally recognized in Austria that provision for the in-patient treatment of psychiatric illness is very unsatisfactory and needs to be improved. There are however a number of factors which mitigate against reform of psychiatric services, three of which are dealt with in detail in this paper. First, patients requiring care rather than treatment are excluded from health insurance benefits and have, where necessary, to rely on social welfare benefits. Secondly, cost per patient day is wrongly used as a criterion of efficiency. Thirdly, standards of efficiency in psychiatric services are lacking. It is pointed out that a feasible reduction in the number of psychiatric hospital beds

could reduce capital expenditure in that area by half. This could be achieved by such facilities as halfway houses and day and night hospitals as well as by better out-patient services. The paper includes statistics on Austrian psychiatric hospitals.

SOCIAL MEDICINE

149. LONGE, M. **What's going on in the community?** *Hospitals*, Chicago, Ill., 1979, Sept. 16, vol. 53, no. 18, pp. 171, 172, 174.

Since 1978 the Center for Health Promotion of the American Hospital Association has been collecting information about hospitals which are involved in community health education. Most of the hospitals are large teaching hospitals with about four full-time staff members working on the community programme. Methods of financing vary, but all participating hospitals have strong administrative backing for the programmes, which include: (i) health education centres; (ii) home visits; (iii) education for people with specific complaints such as diabetes and hypertension; and (iv) child abuse prevention services. Some of the programmes are conducted outside the hospital and many are designed for particular groups such as children or industry. Many hospitals have designed methods of evaluating their programmes. To be successful, a community programme needs: (i) strong support from the hospital board, the administration and the medical staff; (ii) adequate finance; (iii) adequately qualified staff; (iv) careful planning; and (v) good relationships with the community.

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PUBLISHERS

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Collier-Macmillan, 35 Red Lion Sq., London WC1R 4SG.
Greater Glasgow Health Board, 351 Sauchiehall St., Glasgow, G12 8DT.
Her Majesty's Stationery Office (HMSO), P.O. Box 569, London SE1 9NH.
King Edward's Hospital Fund for London, 14 Palace Court, London W2 4HT.
Lea & Febiger, 600 South Washington Sq., Philadelphia, Pa. 19105, U.S.A.
Office of Health Economics, 162 Regent St., London W1R 6DD.
Oxford University Press (OUP), Ely House, 37 Dover St., London W1X 4AH.
Spri, Box 1109, 11181 Stockholm, Sweden.
Swindon Health District, Princess Margaret Hospital, Okus Road, Swindon, Wilts. SN1 4JU, England.
University of Pennsylvania Press, Philadelphia, Pa., U.S.A.

Printed in England for Her Majesty's Stationery Office by Holmes & Sons (Printers) Ltd.
D/d 0596113 K9 2/80 11244 Andover, Hampshire.

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ISBN 0 11 722663 7
ISSN 0018 5307

HOSPITAL ABSTRACTS, VOLUME 29, NO. 1

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